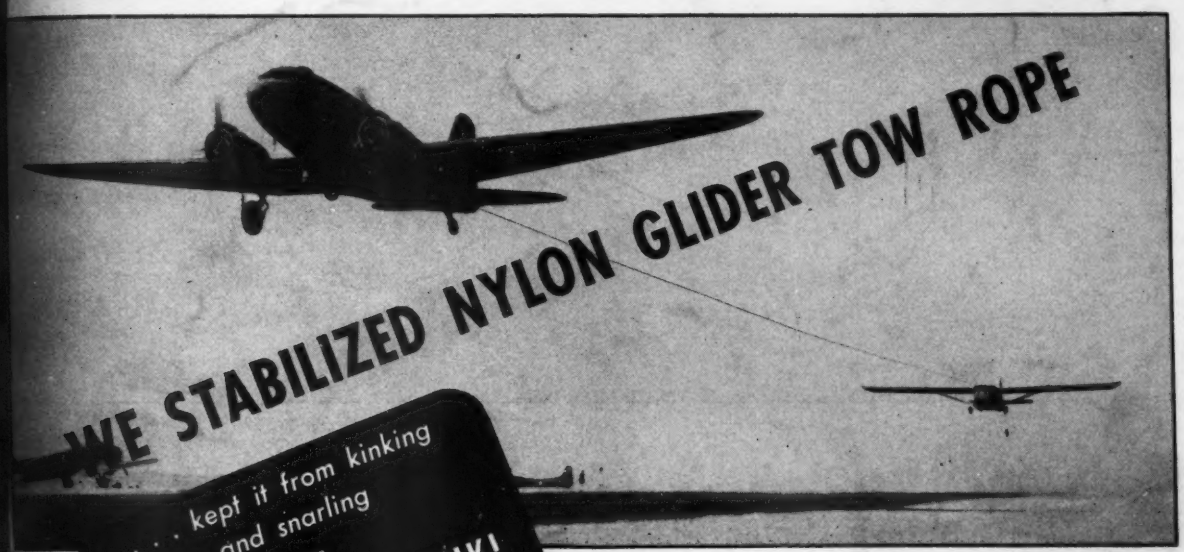
DEC28 '45 0

ATLANTIC FISHERMAN

DECEMBER, 1945



WE STABILIZED NYLON GLIDER TOW ROPE

. . . kept it from kinking and snarling

THEN . . . WE TAUGHT IT TO TALK!

In the early days of the war, Nylon tow rope was shortlived because it kinked and whipped. The success of great invasions by the Airborne infantry depended upon stabilizing the tow rope.

Columbian Laboratories attacked the problem . . . stabilized the rope . . . made it trail straight behind the plane. Our patent No. 2,343,892.

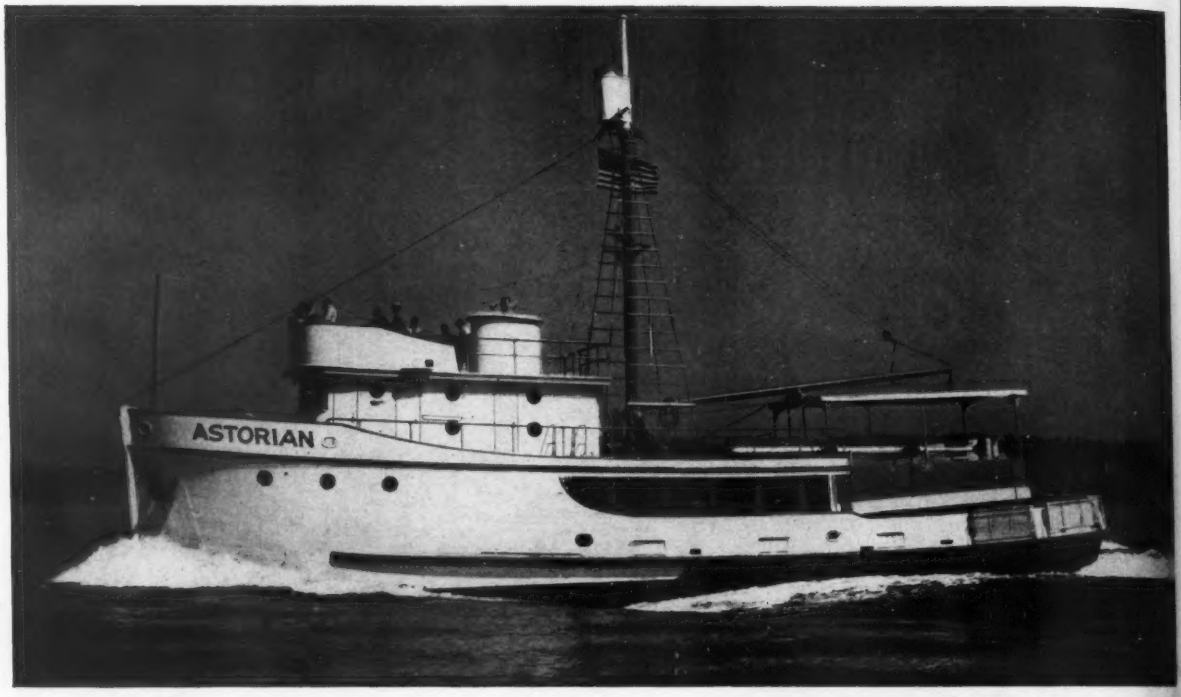
THEN WE GAVE IT VOICE! Plane to glider communication was essential. The old method was to loop the telephone cable along the tow rope. After Columbian Laboratories studied that one, we produced a tow rope with built-in communication wires (Patent Pending), with jacks at the ends to plug in the service . . . jacks that released smoothly when the glider cut loose!

The war is ended, but Columbian Research goes on. To the problems of Peace we bring the skills of war . . . that we may continue to produce only the finest cordage, for each of the jobs it must perform, in the days that lie ahead.

COLUMBIAN ROPE COMPANY
310-80 Genesee Street
AUBURN, "The Cordage City", NEW YORK

Columbian ROPE

AFTER HE LOOKED THE WHOLE FIELD OVER



. . OLAF JOHNSON DECIDED ON HENDY

The powerful Series 50 Hendy Diesel engine in the trim new 84-foot tuna clipper *Astorian* reflects the extreme care with which Capt. Olaf Johnson, co-owner with his brother Roy, sought the best possible equipment for their ship. He has spent almost his entire life in the fishing business . . . has been aboard the better boats all along the Pacific Coast . . . has talked with the more successful skippers.

No wonder, then, that he picked Hendy . . . with its conservative rating, its simplified control system, its ease of maintenance. You, too, will appreciate the overhead camshaft, the unit-type fuel pumps and injectors, and the free-from-trouble operation.

Clean lines on the outside . . . modern design inside . . . modern performance in service . . . these make Hendy Diesels a natural choice for your ship. New catalogues are available. Write to Joshua Hendy Iron Works, Sunnyvale, Calif.

Capt. Olaf Johnson is skipper of the *Astorian*, built by the Seattle Shipbuilding and Drydocking Corp., whose Superintendent William Larson designed the vessel. The clipper's Hendy Diesel is a Model D-56-M, 6-cylinder, 12x15 inch, 450-hp direct reversing engine. Fresh water cooled, it is equipped with sailing clutch and a power take-off from the forward end.

HENDY DIESELS

Air starting; direct reversing. Optional equipment includes: Auxiliary power take-off from forward end; auxiliary air compressor; belt driven generator; sailing clutch; and pilot-house control.

SERIES 20 127-250 hp; 600-900 rpm.	**SERIES 30** 134-265 hp; 600-900 rpm.
SERIES 50 350-665 hp; 350-500 rpm.	**SERIES 60** 410-780 hp; 350-500 rpm.

Also available as marine auxiliaries with generators from 75 to 500 kw.

Power by
HENDY
Engineered to suit your needs

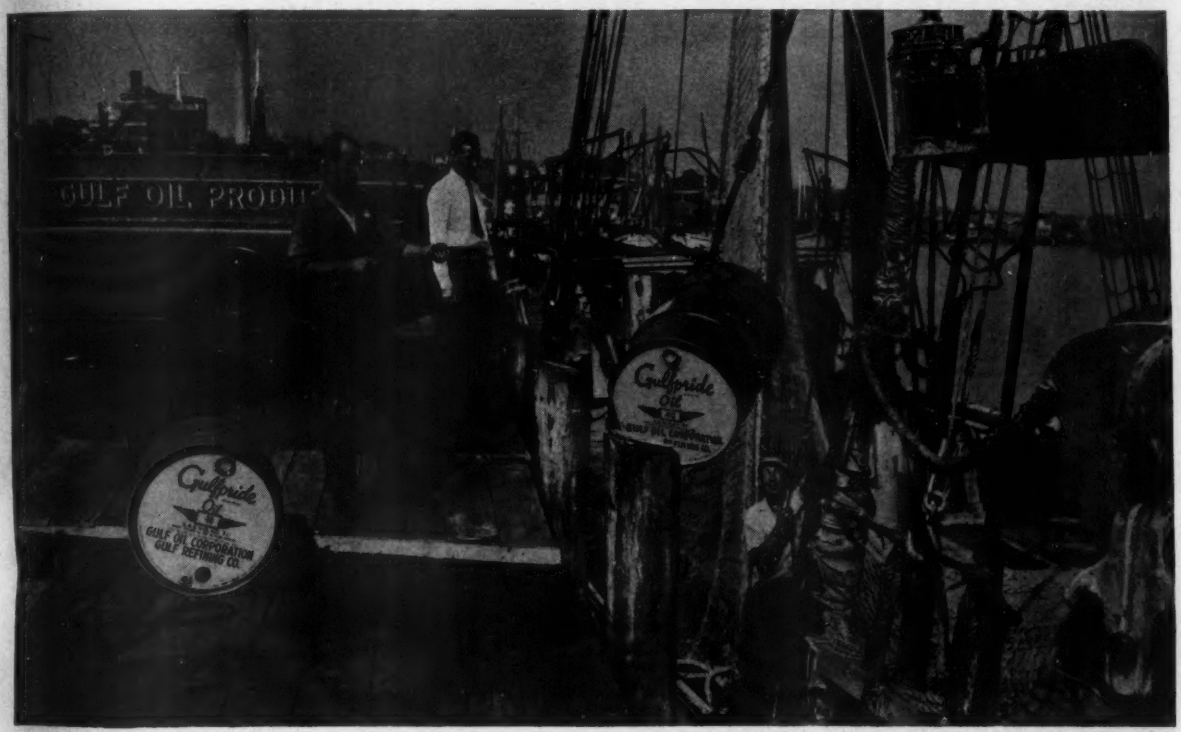
109-D-24M

DIESEL ENGINES
DIESEL ELECTRIC SETS
STEAM TURBINES
TURBO-GENERATORS
REDUCTION GEARS

"With Gulf Quality Lubricants

her engines and auxiliaries deliver top performance and are always dependable"

says Capt. Jose Jacqueta of the 'Ruth and Margaret'



The 'Ruth and Margaret' takes aboard drums of Gulfpride Oil in preparation for a trip to the grounds. This is one of the many quality lubricants that Gulf makes available to fishing boat operators.

"WHEN WE PUT GULF QUALITY lubricants aboard, we leave our worries about mechanical troubles ashore," says Capt. Jose Jacqueta of the 'Ruth and Margaret.' "With Gulf lubricants her engines and auxiliaries deliver top performance and are always dependable."

Because their superior lubricating value and long life have been proved under the toughest service conditions, Gulf quality marine lubricants are preferred by scores of fishermen. These important assets insure the kind of lubrication that means smooth performance of engines and auxiliaries, more working hours, and lower maintenance costs.

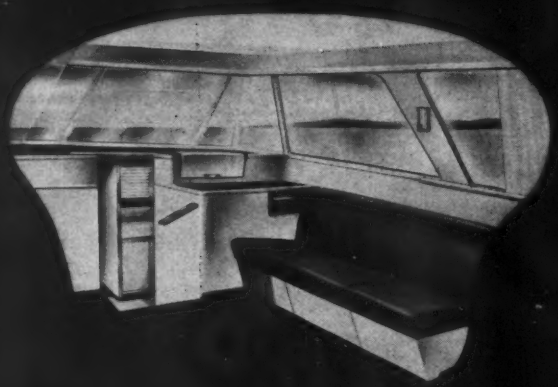
Call in a Gulf Lubrication Service Engineer and ask him to recommend the proper types and grades of Gulf oils and greases for your particular equipment. He will co-operate with you to get maximum efficiency from every unit—on deck and below. Write, wire, or phone your nearest Gulf office today.

Gulf Oil Corporation · Gulf Refining Company

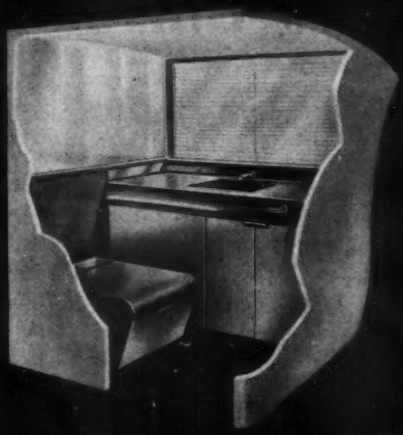
Division Sales Offices:

Boston · New York · Philadelphia · Pittsburgh · Atlanta
New Orleans · Houston · Louisville · Toledo

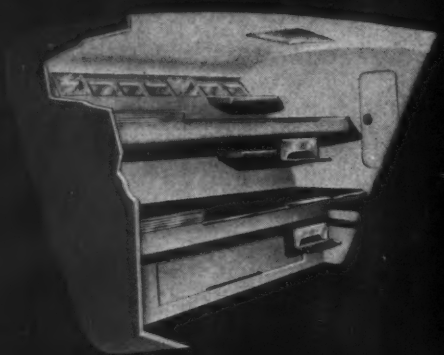
GULF



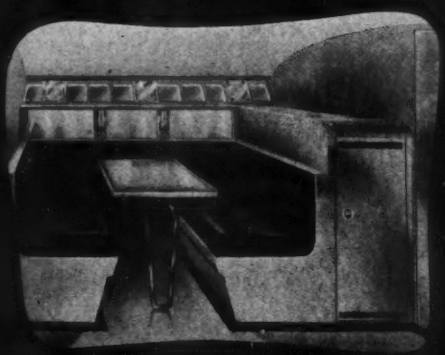
THE LOUNGE



THE LAVATORY



THE STATEROOM



THE DINETTE

Gracious living afloat: Wheeler interpretation

THE WHEELER 40′ SUNLOUNGE* *has comfortable sleeping accommodations for seven. Other cruisers in the Wheeler Standard Fleet: 28′, 32′, 36′, 46′ 53′, 60′. Your authorized Wheeler dealer is now taking orders for delivery.*

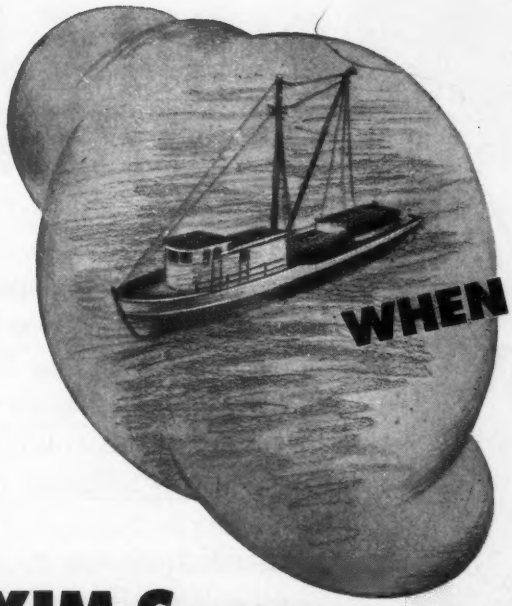
Close scrutiny of the interiors of the Wheeler 40′ Sunlounge* reveals how complete has been the break with outworn tradition, in the planning for comfort and gracious living aboard this distinguished Wheeler standard cruiser. This boldly original thinking, moreover, goes far deeper than meets the eye. From its very keel upward, the Wheeler 40′ Sunlounge is a wholly new expression of modern naval architecture and yacht building method, exemplifies a wholly new *stream-sheered* hull construction. A marked increase in the economy of power, and an advanced standard of safety at sea, are direct consequences.

The Wheeler 40′ Sunlounge is a trade mark, and all rights are reserved. Design patent for the design and features of this cruiser has been applied for and all rights are reserved.*

WHEELER SHIPBUILDING CORPORATION

FOOT OF 114TH STREET AND EAST RIVER, WHITESTONE, L. I., NEW YORK CITY

AN HONORED NAME IN SHIPBUILDING



WHEN THE GOING IS THICK...

A MAXIM SILENCER IS YOUR BEST FRIEND

There's nothing pleasant about groping along through a pea-soup fog, and it's worse if a noisy engine exhaust prevents hearing signals from other vessels or the shore. Yes, you can shut the engine down while you listen, but that puts the boat out of control.

A Maxim Silencer properly selected for your engine and properly installed will eliminate this hazard. And Maxim Silencers give you another safety feature, 100% spark arresting... no sparks or embers to start fires on deck or canvas.

A new development, Maxim Heat Recovery Silencers, go even further... produce steam or hot water from exhaust heat. Bulletins WH 100, WH 103 tell about this new development.

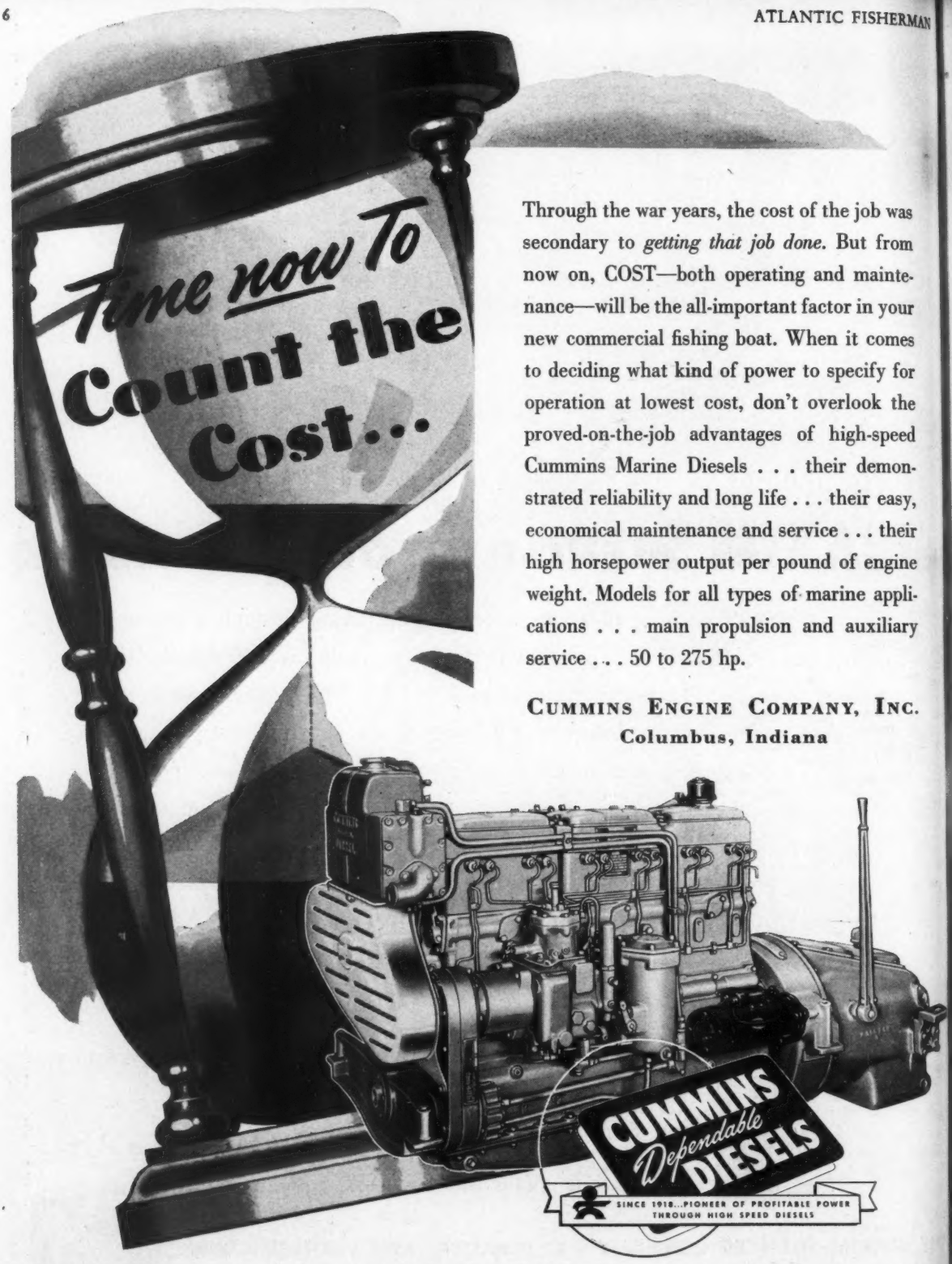
SEND FOR BULLETINS

Bulletins on Maxim marine silencers and spark arrestors will be sent on request. Simply specify whether you are interested in wet type, dry type, and for what size and type of engine, Diesel or gasoline.

THE MAXIM SILENCER COMPANY • 74 HOMESTEAD AVE., HARTFORD, CONN.

ARMY E NAVY

MAXIM



Through the war years, the cost of the job was secondary to *getting that job done.* But from now on, COST—both operating and maintenance—will be the all-important factor in your new commercial fishing boat. When it comes to deciding what kind of power to specify for operation at lowest cost, don't overlook the proved-on-the-job advantages of high-speed Cummins Marine Diesels . . . their demonstrated reliability and long life . . . their easy, economical maintenance and service . . . their high horsepower output per pound of engine weight. Models for all types of marine applications . . . main propulsion and auxiliary service . . . 50 to 275 hp.

CUMMINS ENGINE COMPANY, INC.
Columbus, Indiana

SALES AND SERVICE

CUMMINS DIESEL ENGINES OF NEW ENGLAND, INC. ..... 7 Wethersfield Avenue, Hartford 6, Connecticut
CUMMINS DIESEL ENGINES OF NEW ENGLAND, INC. ..... 18 Hurley St., Cambridge 41, Massachusetts
CUMMINS DIESEL ENGINES, INC. ..... 209-13 North 22nd St., Philadelphia 3, Pa.
CUMMINS DIESEL ENGINES, INC. ..... 25 East Lee St., Baltimore 2, Maryland
CUMMINS DIESEL SALES AND SERVICE OF NORTH CAROLINA ..... 2322 English St., High Point, North Carolina
EDWARD PARKINSON ..... 232 Avenue Alcazar, Coral Gables 34, Florida
CUMMINS DIESEL SALES OF JACKSONVILLE, INC. ..... 217 W. Union St., Jacksonville 1, Florida
CUMMINS DIESEL SALES & SERVICE OF NEW YORK, INC. ..... 1030-1044 Legett Ave., New York 55, New York

ATLANTIC FISHERMAN

REGISTERED U. S. PATENT OFFICE

Published Monthly by

ATLANTIC FISHERMAN, INC.

Goffstown, New Hampshire

P. G. LAMSON, *Publisher*

GARDNER LAMSON, *Editor*

20 cents a copy $2.00 a year

Covering the Production of Fish and Shellfish on the Atlantic Coast, Gulf of Mexico and Great Lakes

VOL. XXVI DECEMBER 1945 NO. 11

Fishery Educational Program Would Benefit Industry

THE fishing industry has been steeped in tradition for so long that it has been slow to modernize itself, although lately, there has been a noticeable trend toward new methods. "My father and my grandfather before him did it this way so it is good enough for me," has been a big reason for retarded advancement. Another and bigger reason has been the lack of trained personnel. Research engineers and technologists of many kinds could contribute to the growth and expansion of the industry, building it into a dominant, sound and stable one which would provide unending employment.

The industry should take it upon itself to begin improving the skills of the present personnel. A comprehensive training program would convert the average fisherman and plant worker into one who is not only proficient through repetition, but is also open minded and on the lookout for possible improvement of methods and equipment.

Of great importance is the need for attracting new people to the industry. The majority of present fishermen, for example, have come from seafaring families and have an inborn understanding of the water. But with the continued expansion of the industry and the adding of more boats, it is becoming necessary to recruit men from other walks of life. To do this, the work of the industry must be made interesting and a means provided for the training of newcomers.

By enlisting the aid of local schools and colleges in setting up interesting courses of training the industry should be able to interest the workers in acquiring new skills and improving their old one. Courses in elementary bacteriology, sanitation, marketing and processing would be of benefit to the industry in bringing about more efficient production and less waste. Very probable expansion resulting from this would be an attraction to future technologists now studying in colleges and universities.

Producers and processors could get together and act through their associations offering scholarships to interested young men. The U. S. Fish and Wildlife Service is ready to help in every way within its jurisdiction giving information and assistance.

Through a concentrated effort public schools and colleges could be induced to set up regular courses of study, stimulating a public interest for the future. An extension service for marine fishermen analogous to that performed for the farmers would help keep the industry up to date on the latest research and scientific findings. To operate such a service successfully would depend not only upon the development of a sound system of Federal aid to the states and a sound co-operative administrative program but also upon the development of an adequate personnel.

The need for training and education within the industry is tremendous. The future depends upon it and the responsibility is the industry's. Action should be taken at once to show the country that the fishing industry is not in a rut but is progressive and enterprising.

YOU STICK TO THE JOB
IN SPITE OF CONDITIONS

... So Does "U.S."

Whatever the weather... or world conditions, fishermen stick to their job. And "U.S." Rubber stays with its job—providing top quality waterproof clothing and footwear.

"U.S." waterproof wear gives long service under the toughest conditions—resisting cracking and abrasion. "U.S." clothing is 100% waterproof with vulcanized seams.

Sold Only Through Industrial and Retail Stores

"U. S." STORM KING BOOTS

MADE BY THE MAKERS OF

"U. S." ROYAL FOOTWEAR — "U. S." AMMOCURE RAYNSTERS

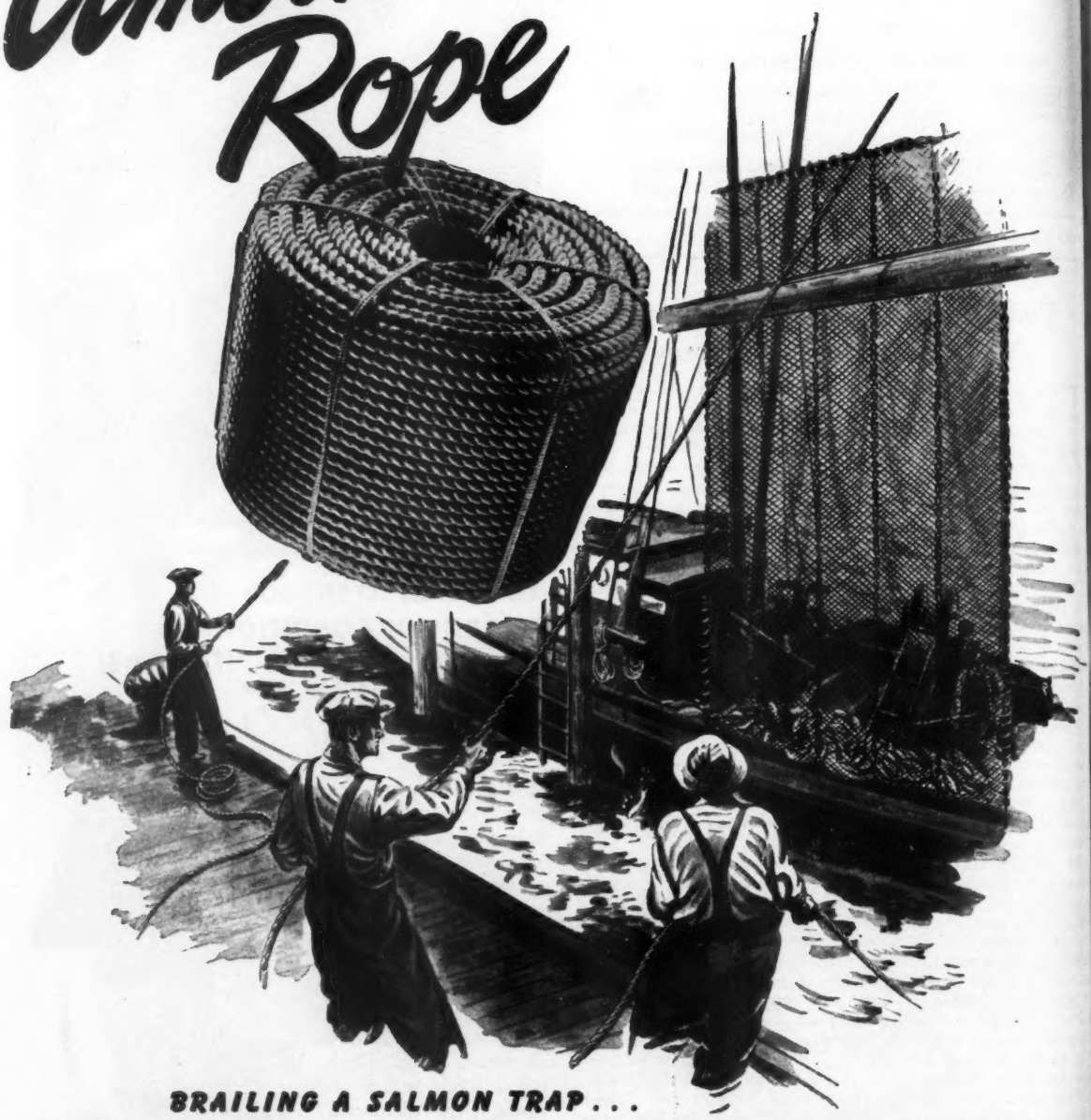
Serving Through Science

UNITED STATES RUBBER COMPANY

1230 Sixth Avenue • Rockefeller Center • New York 20, N. Y.

EXPERT JUDGMENT PREFERS

American Rope



BRAILING A SALMON TRAP . . .

Soaked in salt water, wind-dried and sun-baked, Pacific Coast salmon traps are a typical example of the punishment given rope in pound net fishing. "AMERICAN" ROPE has a reputation among the fishermen for being able to give long service under these harsh conditions. "AMERICAN" ROPE is made by seasoned craftsmen, to manufacturing standards that in fifty years have never compromised on quality.

The Need for Rope Conservation Still Exists

AMERICAN MANUFACTURING COMPANY, BROOKLYN 22, N. Y. • ROPE • TWINE • PACKING • OAKUM

Branch Factory: ST. LOUIS CORDAGE MILLS, ST. LOUIS 4, MO.

Sales Offices: BALTIMORE • BOSTON • CHICAGO • HOUSTON • NEW ORLEANS • PHILADELPHIA

NOW THE GREATEST RADIOTELEPHONE VALUE EVER OFFERED!

RADIAPHONE 25

A TRIUMPH OF ELECTRONIC ENGINEERING!

$149.00 COMPLETE Including Power Pack, Mike, Crystals and Tubes! (FOB FACTORY)

YOUR LONG-PROMISED postwar radiotelephone is a reality at last! Revolutionary in design and construction, the *Radiaphone 25* gives full sized performance in midget size... is completely self contained with the power pack in one cabinet ...is of the highest quality throughout... and sells at a price far below that of our comparable pre-war model!

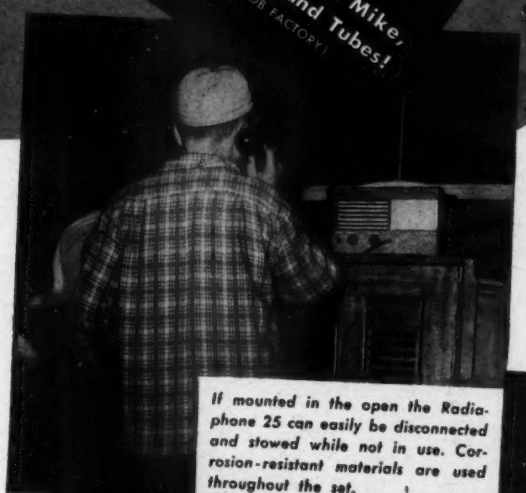
COMPLETE IN ONE CABINET! Modern circuit and cabinet design and the use of new midget tubes allow the *Radiaphone 25*, with its power pack, transmitter, receiver and loud speaker, to be completely contained in a single steel cabinet 12" x 7" x 6½".

HANDSOME, CONVENIENT, EASILY INSTALLED! The chrome and crackle finished cabinet is shock proof, vibration proof and the entire assembly is corrosion resistant. Only three wires are necessary for installation and the small size of the *Radiaphone 25* makes it adaptable for use aboard boats as small as 16 feet.

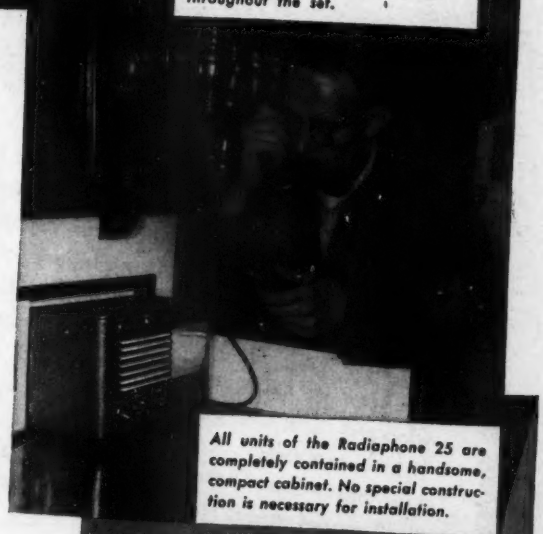
NO EXTRAS TO BUY! Your *Radiaphone 25* comes completely equipped ready to install. Included are: Transmitter, Receiver, Loud Speaker, Tubes, Microphone, Crystals, Instruction Books for installation and operation and complete forms and instructions for obtaining license. (Phone Handset illustrated, available at additional cost.)

SIMPLE OPERATION! The *Radiaphone 25* is completely pre-tuned ...operates on 4 frequencies... ship-to-ship (2 bands), ship-to-shore and ship-to-Coast Guard. Uses 6 to 12 volt batteries and causes a very low current drain.

FINEST CONSTRUCTION! Radiaphone communication equipment is engineered and manufactured by Radiation Products, Inc., the West's leading builders of marine electronic equipment. These sets incorporate extremely high electrical safety factors to assure long and dependable service at sea.



If mounted in the open the Radiaphone 25 can easily be disconnected and stowed while not in use. Corrosion-resistant materials are used throughout the set.



All units of the Radiaphone 25 are completely contained in a handsome, compact cabinet. No special construction is necessary for installation.

BUILT FOR RUGGED SERVICE

The RADIAPHONE 25 *is ideally suited for use aboard fishing and commercial craft where limited broadcast range is satisfactory. Simple operation, small size and sturdy construction at a reasonable price make the* RADIAPHONE 25 *a sound and practical investment for the work boat owner.* RADIAPHONES *are also available in larger models up to $965.00.*

DEALERS—

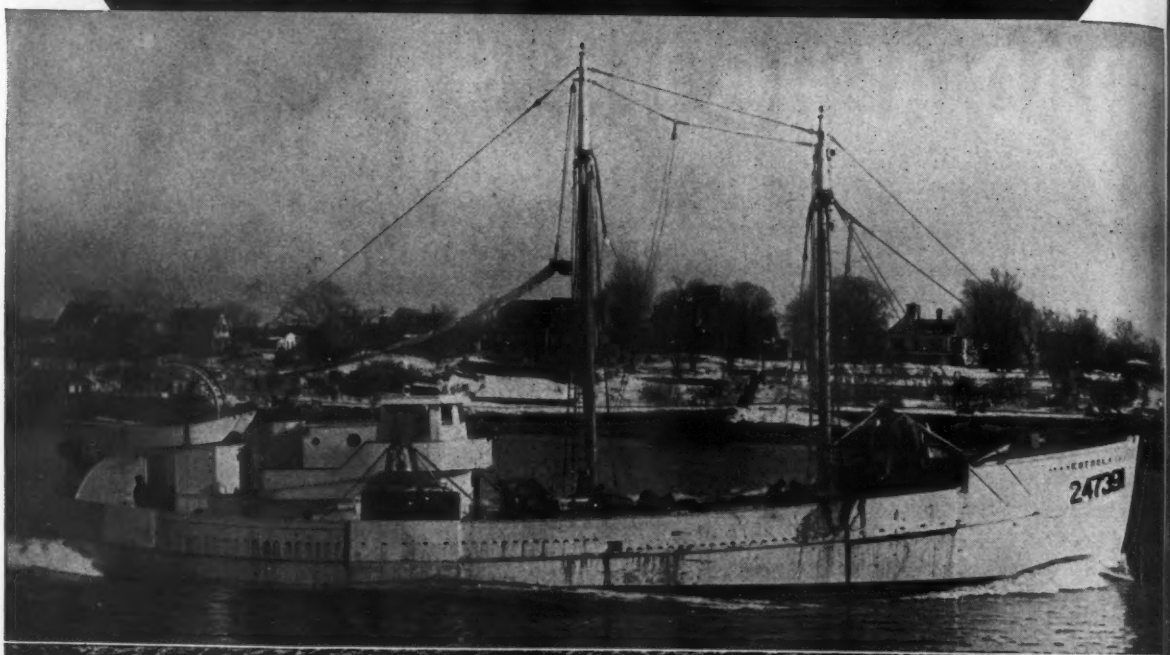
The Radiaphone 25 is the first of a complete line of Radiaphones soon to be in production. A number of territories in North America are still available. Write for further information.

SEND FOR FREE ILLUSTRATED FOLDER

Radiation Products Inc.

DEPT. 20 • 1142 WALL STREET • LOS ANGELES 15, CALIFORNIA

BIGGEST AND BEST



The 111′ super-dragger 'ESTRELA,' built for Capt. Joaquim Gaspar, represents an investment of over $200,000. Nothing was sacrificed to provide every comfort for captain and crew, maximum operating conveniences, and machinery of ample size and capacity. Her 6 cylinder, 15″ x 19″, 600 H. P. Atlas Diesel is the LARGEST DIESEL ever installed in any Gloucester Dragger. It enables the crew to set gear to the wind'ard rather than having to steam wind'ard. It also provides additional speed running to and from the fishing grounds.

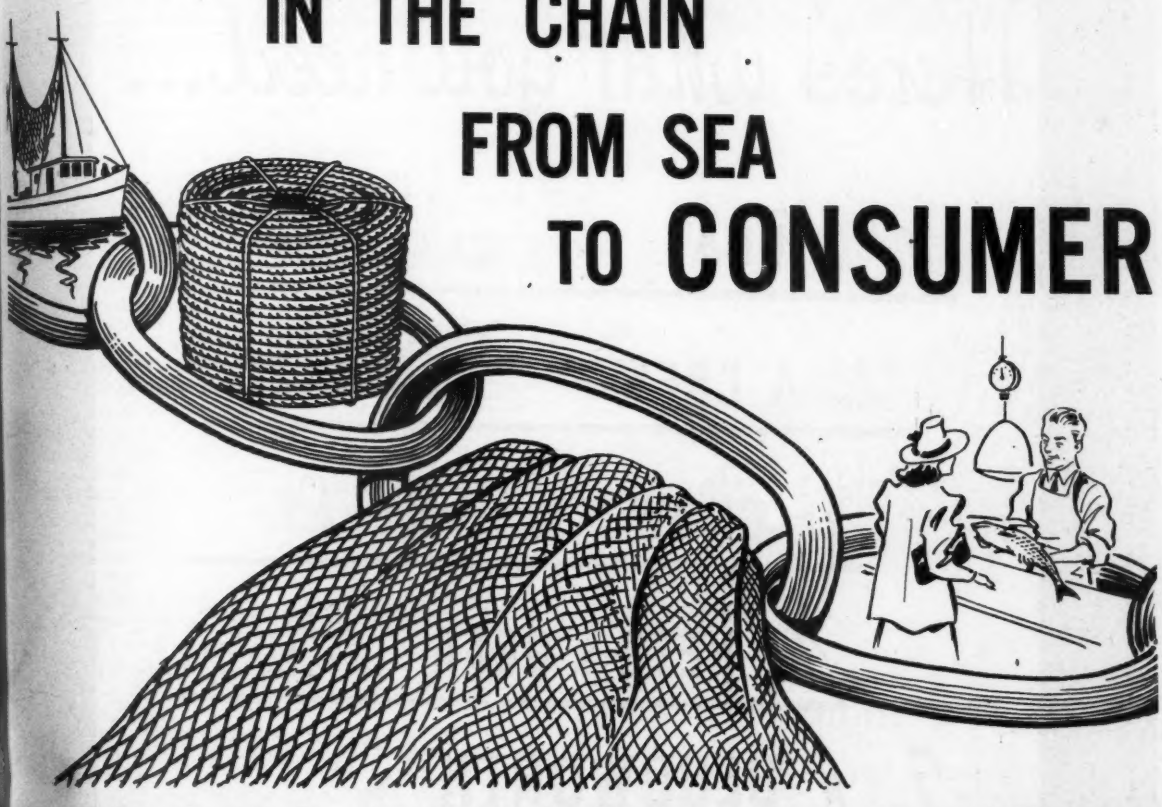
Her big Atlas Diesel swings a 4 blade, 78″ x 58″ propeller on a 7¼″ monel metal shaft. The huge 14′ x 29′ engine room gives the engineer all possible latitude. On her maiden trip she hailed 130,000 lbs. of haddock and cod, and averaged 11 knots on her return from Western Bank.

ATLAS IMPERIAL DIESEL ENGINE CO.

Oakland, California, U.S.A.

New York • Chicago • Philadelphia • Baltimore • Gloucester • Houston
New Orleans • Terminal Island • Portland • Astoria • Seattle
San Francisco • San Diego • Vancouver • Montreal • Halifax • Ketchikan

THE MOST IMPORTANT LINK IN THE CHAIN FROM SEA TO CONSUMER



STRONG DEPENDABLE NETS

In the fishing industry the fisherman's net IS and MUST BE the strongest link — for no matter how perfect all other equipment and conditions for a big haul — unless his net stands the strain — brings the catch safely aboard — the chance for delivery to the market — the opportunity for big profits, is lost.

Ederer nets are **the last word in fish net durability** — strong, sturdy, long-lasting — the ultimate result of 60 years of experience in manufacturing high grade nets — your assurance of holding your record catches — your insurance against loss — your guarantee of the utmost return FOR your labor and ON your investment.

For top quality fish nets see your EDERER dealer — he too, knows THEY'RE BEST.

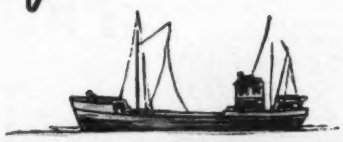
Export, Eastern Hemisphere — FRAZAR & COMPANY
50 Church St., New York 7, N.Y. Cable: "FRAZAR" New York

R. J. EDERER CO.
540 ORLEANS ST.
CHICAGO, ILLINOIS
GLOUCESTER - BILOXI

EDERER

EDERER INC.
UNITY & ELIZABETH STS.
PHILADELPHIA, PA.
BALTIMORE - MIAMI

Here's what you need...

1. A BOAT 

2. A CREW

3. CHOW

4. NETS & GEAR

5. A BLUDWORTH* DIRECTION FINDER

AND *MODERN SUPERSONIC* DEPTH SOUNDER

...and you're all set for a record catch!

* The BLUDWORTH DIRECTION FINDER and the SUPERSONIC DEPTH RECORDER enable the fisherman to locate fishing grounds, stay over the fish, make his catch, and, with full load, return straightway to port. No lost time because of fog or low visibility. *Special attractive plan available to fishermen.*

BLUDWORTH MARINE
100 GOLD STREET, NEW YORK 7, N.Y.
DIVISION OF
National-Simplex-Bludworth, Inc.

The Sounding-Lead

By Fred Lardner
Washington Correspondent

PROSPECTS FOR 1946—Marketings of fresh and frozen fish in 1946 are expected to be somewhat larger than in 1945, according to the Department of Agriculture. Imports will remain about the same. Civilian supplies per capita are also expected to be slightly above the 6.3-pound (dressed weight equivalent) estimated for 1945. Consumption should show a similar increase, particularly if fish prices decline as a result of increased supplies of fish and of many other foods, particularly meats.

Fish supplies available to consumers next year will probably contain a higher proportion of the common varieties and sizes than during the war years. Inland consumers are likely to have much larger supplies and wider range of choice, as transportation and distribution facilities improve and market competition becomes keener. Continuation of the trend toward larger use of frozen fish products is expected. This will be facilitated by improvement of inland transport, the development of higher quality products and increases in the production of dressed or filleted fish.

If exports of canned fish in 1946 are much the same as this year, civilian supplies in 1946 will be about 530 million pounds. The increased supply results from reduced military demands. This total will provide an average of about 3.8 pounds per capita, compared with the 2.8 pounds expected in 1945, and the 5-pound national average of 1935-39. Civilians throughout the nation may expect supplies to increase early in 1946 as distribution approaches normal. Total civilian demand is expected to remain strong, with prices of canned fish in 1946 holding at or near present ceilings.

CURRENT SUPPLY—Civilian supplies of fresh and frozen fish this year have been the largest since the start of the war, and about 10 percent larger than in 1944, and are expected to be slightly larger than the 1935-39 average of 6.3 pounds, according to the Department of Agriculture.

Total marketings of fresh and frozen fish may be 10 to 12 percent greater in 1945 than in 1944, due to an increase in the number of boats, improvements in efficiency of boats and equipment, and the lifting of restrictions on fishing areas. Freezing of fish in 1945 is expected to surpass 1944 record freezings by 10 percent.

The canned fish pack in 1945 is expected to be about 630 million pounds, slightly less than in 1944, but imports will be larger. Exports of canned fish may total 130 million pounds, compared with 108 million pounds in 1944. Military requirements are indicated at about 165 million pounds.

PRODUCTION TRENDS—The yield of fishery products in 1945 probably will equal the average prewar figure, but probably will fall slightly below the 1944 level, the Fish & Wildlife Service reports. Total catch will be about 4.4 billion pounds. Chief reason for the lower tonnage this year is a decline of about 225 million pounds in the catch of pilchards or California sardines, which usually accounts for one-fourth the total U. S. catch.

Production for the fresh fish markets is generally high throughout the country. All major New England ports have handled more fish this year than at any time during the war. Landings at Gloucester, Boston, New Bedford, Provincetown and Portland, amounted to about 525 million pounds by mid-November, compared with about 430 million pounds in 1944.

Landings of fresh and salt-water fish in the Gulf of Mexico increased about 15 percent, totaling about 9 million pounds by the end of October. Receipts of hard crabs increased from 10,323,000 pounds to 11,767,000 pounds. Oysters declined slightly, from 507,000 barrels to 435,000 barrels.

In the Chesapeake Bay area, receipts at Norfolk for the first 10 months were 24,703,590 pounds, 2½ million pounds more than in 1944.

Overall production of canned fish, with the exception of pilchards and tuna, is behind 1944 by about 6 percent. On the Atlantic Coast the pack of mackerel was only 44,351 cases by

FOR FISHING,
WORK BOATS
and YACHTS

Buy

Superior DIESELS

Medium Duty
Heavy Duty

•

Economically Priced
Dependable Power
Low Maintenance Cost
Smooth Operation

•

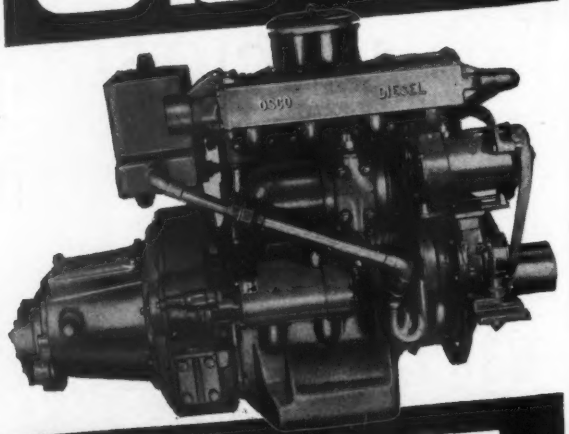
Sales and Service

HARBOR SUPPLY OIL CO.

39 Portland Pier Telephone 2-6537

PORTLAND, ME.

OSCO



MARINE DIESELS

RELIABLE, STEADY, ECONOMICAL POWER for FISHING CRAFT

Diesel power means "get-there-and-back" at low cost per mile per hour.

OSCO DIESEL means few repairs, quick repairs and replacement parts when you need them.

The OSCO fresh-water cooling system with full cylinder-length jackets, bronze heat-exchangers and manual temperature controls assure a sea-going engine under every condition of wind and weather.

Eight models

2 cyl., 24-, 28-, 30 h.p.
4 cyl., 62-, 70-, 75 h.p.
6 cyl., 77-, 83 h.p.

OSCO Marine GAS ENGINES for those who need them

Osco Still Needs Alert Distributors in a Few Good Markets—Write!

OSCO
2020 E. Orleans Street
Philadelphia 34, Pa., Dept. A

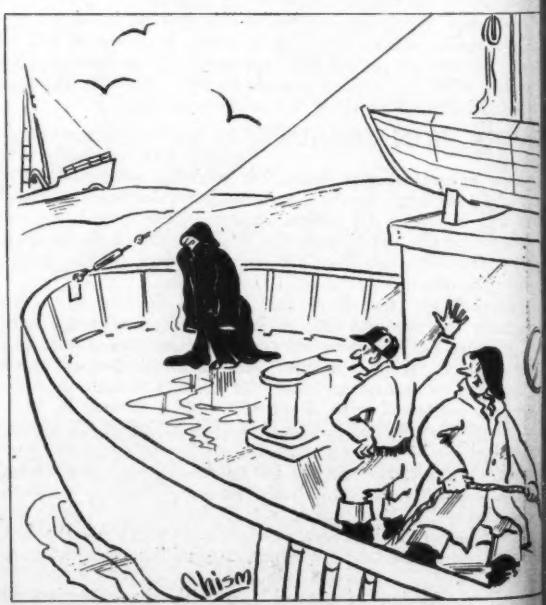
the end of September, compared with 175,998 cases last year. The Maine sardine industry, with 2,007,784 cases for the first nine months of 1944, was running about 20 percent behind 1944. Although receipts of shrimp are holding up fairly well—222,153 barrels through October as compared with 288,483 barrels last year—the canned pack is only 113,813 cases, about one-third the 1944 pack.

LABOR BILL—Early in 1946 the Senate and the House are expected to debate and vote on bills amending the Fair Labor Standards Act. A subcommittee of the Senate Labor Committee has concluded hearings on S. 1349 which would amend Section 13 (a) (5) of the Act to exempt offshore fishing operators, but include employees engaged in loading, unloading or packing of fishery products for shipment or in processing, marketing, freezing, canning, curing, storing and distributing fish. As soon as the hearings are printed, the bill will be reported to the full committee and then to the Senate. The House Labor Committee has held hearings on three bills similar to S. 1349. It has considered eight bills altogether and the final form of the legislation to be recommended by the committee is being determined.

PRICE CONTROL—Chester Bowles, OPA chief, has refused the request of the National Fisheries Institute to discontinue price control on fish and fishery products. "Removal or suspension from price control of commodities, unless such action would not result in an increase in prices above the general level of existing ceilings, would not be in accord with our obligation to consumers under the Emergency Price Control Act," Mr. Bowles wrote the Institute. "It may be quite true there is a temporary decline in sales. It may also be true that prices of some uncontrolled species have drastically declined. However, no evidence has as yet reached this office that consumers are now paying or will pay in the future, when we will enter the normally low production period, less than ceiling prices for the controlled species. Until such time as the general level of consumer prices indicates that ceilings are no longer necessary, we do not feel that price control should be removed from major controlled fishery products."

The price of fresh and frozen bay scallops has been increased about 4 cents a pound, to bring them in line with the fishermen's 1942 average prices. Imported and domestic sponges processed from marine animals have been exempted from price control.

FISHERY AGENCY—Current rumor in the Agriculture Department claims that Secretary of Agriculture Anderson can have control of commercial fisheries if he so desires. A change, however, is dependent on



"There's a slicker over there you can borrow, Joe,—no, somebody's using it!"

WIDER RANGE of SPEEDS

One advantage of Twin Disc Marine Reverse and Reduction Gears when applied to modern high speed diesel engines, is often overlooked: the wide range of operating speeds which this combination gives the boat owner. This means greater flexibility, and faster acceleration, features which are highly essential to the easy maneuvering of any boat. In addition, Twin Disc Marine Gears are built for long wear-life, automatic clutch adjustment, and simple maintenance. That's why Twin Disc Marine Gears are preferred for all types of work-boats. TWIN DISC CLUTCH COMPANY, Racine, Wis., (Hydraulic Division, Rockford, Ill.).

Power Take-off

Heavy Duty Clutch

Machine Tool Clutch

ARMY-NAVY

Tractor Clutch

Hydraulic Torque Converter

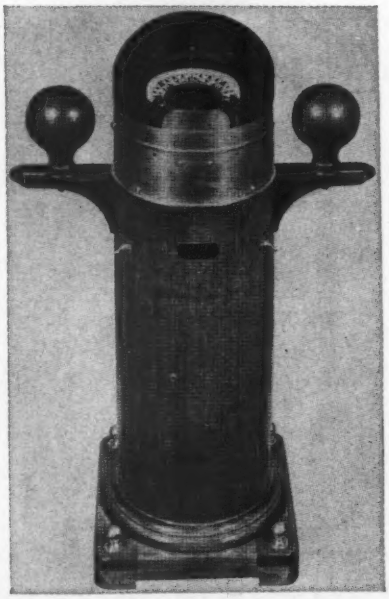
TWIN DISC MARINE GEARS

REG. U.S. PAT. OFF.

SPECIALISTS IN INDUSTRIAL CLUTCHES SINCE 1918

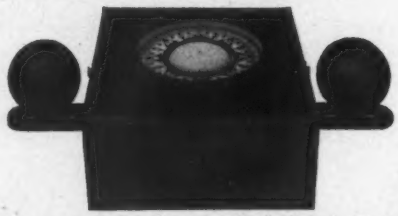
KELVIN-WHITE COMPASS EQUIPMENT

for FISHERMEN



The renowned Kelvin-White Spherical Compass is shown here in a spring suspension compensating binnacle, that reduces wear and tear on a compass pivot and jewel. It is the steadiest compass at sea, and has been adopted and is in general use on all Boston trawlers, and many others. Available in 7″ and 8″ sizes.

The same equipment for shelf use.



Flat-top overlighted or underlighted 6″, 7″ and 8″ compasses, with or without quadrantal globes.

Manufacturers of
NAVIGATIONAL EQUIPMENT
for all types of vessels

KELVIN & WILFRID O. WHITE CO.
90 State St., Boston 9, Mass.

Congressional approval of the bill to permit the President to reorganize government departments and agencies, and it now appears the bill will pass giving the President great authority to do what he pleases.

This subject has occupied the attention of the industry several times in recent years. In 1944 the House Merchant Marine and Fisheries Committee held a hearing on a bill sponsored by Representative Bates of Massachusetts and requiring a transfer of fisheries control to the Agriculture Department.

However, the bill was not reported by the committee. At that time the Agriculture Department, through Secretary Wickard, said it did not want control of fisheries. The present Secretary, however, is reported as keenly interested in this industry, and as a member of the House conducted hearings to determine what could be done to help it.

COMMISSION REPORT—In its Fourth Annual Report to the Congress and to the Governors and Legislators of its fourteen member States, the Atlantic States Marine Fisheries Commission urged support of three measures now pending in Congress:

The first of these is Senator Guy Cordon's bill, S 924, requiring that before acting on any river or harbor improvement proposal, Congress shall have before it a report from the Fish and Wildlife Service showing what effect the proposed works would have upon the fisheries, in order to avoid the destruction of spawning grounds or blocking of spawning runs.

The second measure recommended is Congressman Bailey's bill H R 3972 to encourage adequate treatment of industrial pollution that now harms or threatens the fisheries. This bill would permit industrial taxpayers in computing net income for income tax purposes to deduct amounts spent for the elimination of wastes under the supervision and with the approval of the appropriate State or interstate authority.

The Commission also urges the amendment and adoption of the McCarran-Sumner Resolution (SJ Res 48 and HJ Res 225 to reaffirm the title of the States in lands under tidal waters and to make clear that the jurisdiction of the States extends outward to the "limit of the jurisdiction assented by the United States in any instance". The President's recent proclamation asserting the jurisdiction of the United States over fishery resources contiguous to its coasts gives added emphasis to the Commission's recommendations, it contends.

The Commission also asserts the interest of its fourteen member States in any future international treaties, and asks for the establishment in the State Department of some unit or other device to provide a regular channel of communication and consultation between the Federal Government and the States on fishery or other conservation treaties which affect the States.

The report describes the Commission's plans for the establishment of a new Committee on Sanitation which would recommend sanitary practices designed to produce the highest practicable quality in fisheries products.

STORAGE HOLDINGS—Total holdings of frozen fish and shellfish reached an all-time peak of 138 million pounds on November 1, and inventories since the first of the month have continued the upward trend in most important centers of production and marketing. It is estimated that holdings on December 1 were about 146 million pounds.

The largest quantity of fish ever held in storage previously was 132 million pounds, reported on October 1, 1944. Present holdings represent an increase of about 10.5 million pounds over October 1, 1945, and are 27 million pounds above the 5-year average for this time of year.

SEED OYSTERS—There will be no exportable surplus of seed oysters available from Japan until 1946 the American Military Government in Tokyo has informed the Department of Commerce. It is expected that some 10,000 cases of 12,000 or more spat each, will be available for export around December 1946 to March 1947.

Any firm in the United States desiring seed oysters from Japan by the Spring of 1947 should inform the Foodstuffs Unit, Bureau of Foreign and Domestic Commerce, within the next three or four months so that a combined amount for the entire U. S. industry may be forwarded to the seed oyster producers in Japan through AMG.

ANOTHER FAIRBANKS-MORSE

THE "FLORENCE & LEE"

It didn't take the "Florence & Lee" long to win her membership in the High-Line Fishing Fleet. In her first full month of fishing, this sleek steel trawler brought her owners, the Superior Fish Company of New Bedford, a bag of 371,000 pounds in two trips.

To prove that that was no fluke of beginners' luck, just recently Captain Andy Decker brought her into New Bedford loaded to the gunwales with a haul of over 190,000 pounds.

The "Florence & Lee's" twin of the Superior Company's fleet, the "Hilda Garston", also is high up among the big money-makers.

Both were built at the Somerset Shipyards, Fall River, and both are powered by FAIRBANKS-MORSE Model 35 F Marine Diesels.

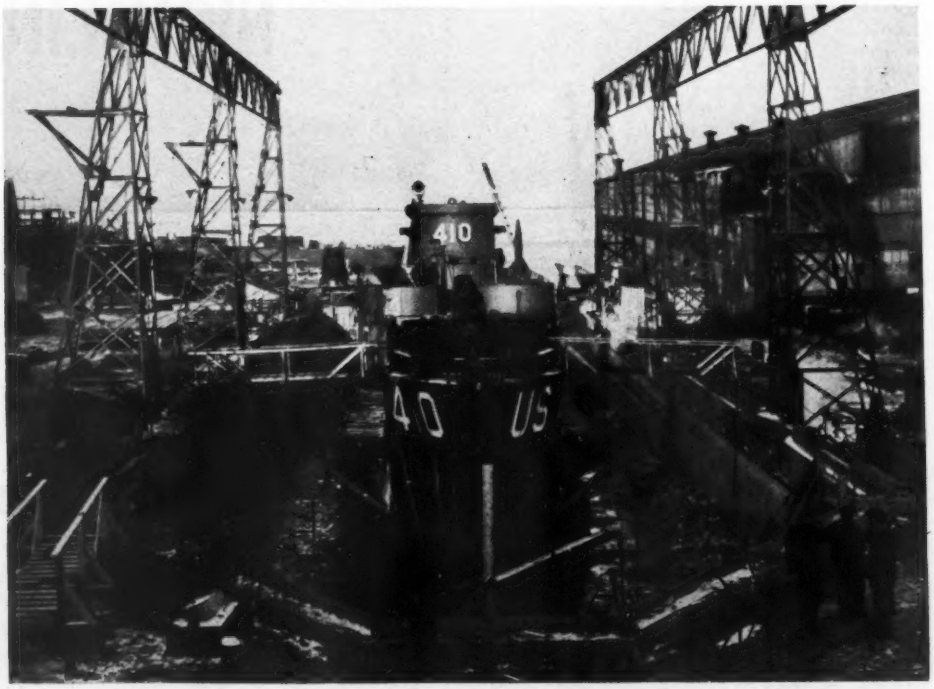
Owners and captains have nothing but praise for their twin High-Liners and their power plants.

That's the recipe for success in the fishing industry: Stout Vessels, Sea-wise Captains and Fairbanks-Morse Diesels.

Fairbanks-Morse *A name worth remembering*

Diesel Locomotives • Diesel Engines • Generators • Motors • Pumps • Scales
Magnetos • Stokers • Railroad Motor Cars and Standpipes • Farm Equipment

BUILDING AND DRY DOCK FACILITIES FOR THE FISHING FLEET



With the termination of war work, Lawley's will be in a position to give excellent service to the fishing fleet in both building and repairing.

You will have the advantages of Lawley's invaluable experience gained in building 297 fighting ships of 9 types and in converting and repairing countless other vessels.

When building at Lawley's you can have confidence that you will receive a quality built vessel that will meet the most exacting requirements of operating efficiency.

Lawley's new dry dock facilities are the most modern and best equipped available. They permit the handling of several draggers and trawlers simultaneously, with prompt service.

GEORGE LAWLEY & SON Corp.
Neponset, Mass.

"LAWLEY BUILT" — A Symbol of Excellence in the Maritime World Since 1866

FOR GRINDING...SHREDDING...PULPING...PUREEING...

No other mill gives you *ALL* the outstanding advantages of the new

ENTERPRISE Vertical Mill

Naturally, you can do more effective work in a *vertical* position than you can in a horizontal position and so can a grinding mill. The New Enterprise Vertical Mill is essentially the conventional hammer mill stood on end... a design offering you many benefits obtainable in no other way. There is an Enterprise Vertical Mill to meet your specific needs of grinding, shredding, macerating or pulping.

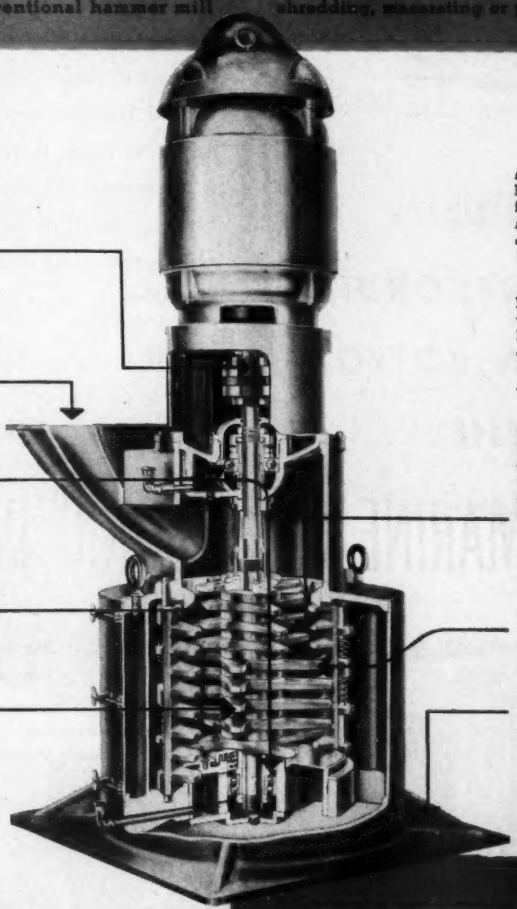
Less power loss... less operating noise because motor is direct-connected without gears or belts. ***Belts and gears in horizontal mills usually are noisy, result in lost power.***

Less labor because vertical construction permits down feed and down discharge. ***Horizontal mills require excessive handling of materials.***

Longer operating life because fully lubricated bearings are in moisture and dust-proof housings.

Uniform quality of grind assured by even distribution of material around rotor. ***In horizontal mills, smaller discharge area usually results in material "bunching."***

Faster maintenance because hammers are changed in minutes... ***not hours!***



More effective work, free from vibration, because the mill grinds for full revolution of rotor. ***In horizontal mills, only one-half of each revolution works. Result: Vibration, less work.***

Longer hammer life because even wear on rotors maintains perfect balance. ***In horizontal mills, uneven wear on rotors results in unbalanced operation, shortened hammer life.***

Quick change of grind fineness because inexpensive screens are easily changed. ***Horizontal mills usually require extensive alteration to produce different finenesses of grind.***

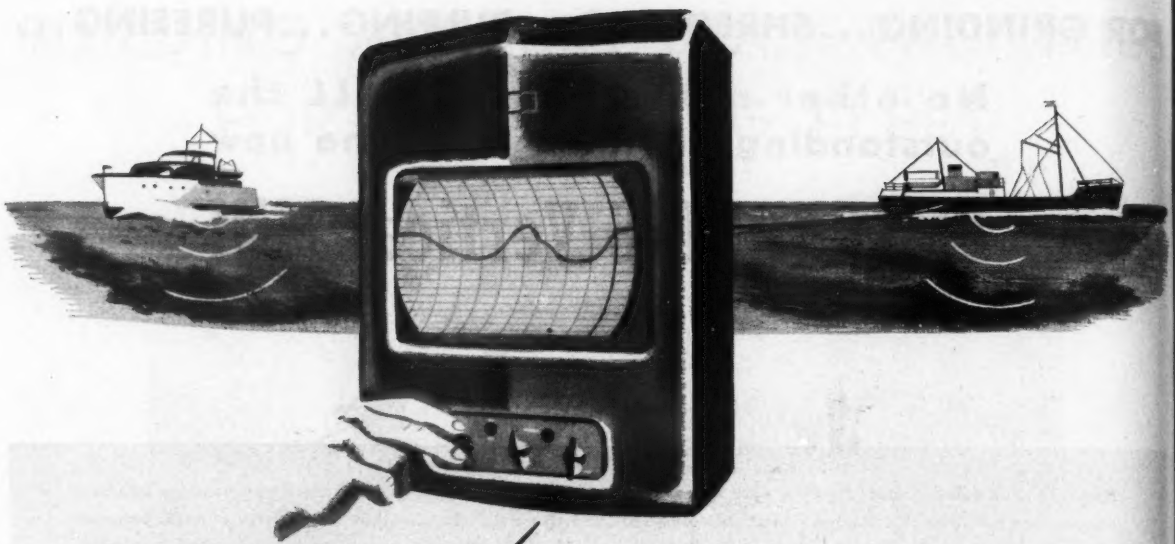
Fast complete grinding at slower speeds because full revolution of rotor is utilized. ***Ordinary mills, running at the same speed, work only half as fast.***

Less floor space needed because of vertical design. ***Horizontal mill requires large floor area in plant.***

WRITE FOR THE NAME OF YOUR NEAREST DEALER

for complete information on the many types of rotors and accessory equipment available.

PROCESS MACHINERY DIVISION
OF
ENTERPRISE ENGINE & FOUNDRY CO.
18th & Florida Streets San Francisco, California
Enterprise Process Machinery



at a glance!

A CONTINUOUS
HORIZONTAL RECORDING
OF THE OCEAN BOTTOM
WITH THE

The Bendix-Marine* supersonic depth-sounder has won the acclaim of fishermen all over the world for its simplicity, accuracy, ruggedness and low cost. Both in fishing and in navigation it provides a graphic, faithful reproduction of bottom conditions at all times. *Supersonic* emission prevents false recordings from extraneous sound sources.

Detailed technical information on the performance of this highly valuable navigational aid will be sent you upon request.

NEW BENDIX-MARINE SUPERSONIC DEPTH-SOUNDER

No other Depth-Sounder has ALL these features:

Lightweight • Portable • Lower First Cost • Easier Installation • No Relays Required • No Keying Adjustments • No Demagnetizing of Projectors • Uses Dry Recording Paper • Large Unobstructed Viewing Window • Horizontal Graphic Chart • Good Bottom Coverage at All Depths • Works on All Available Voltages • Graphic Recorder in one Compact Unit • Component Parts are Accessible for Maintenance, Quickly and Simply Replaced.

INSTRUMENTS — Bendix-Marine — CONTROLS

MARINE DIVISION, BENDIX AVIATION CORPORATION
NORWOOD, MASSACHUSETTS

Bendix AVIATION CORPORATION

*TRADEMARK

TRUSTWORTHY QUALITY

Battery users have learned that they can depend on Willard Batteries for long life and high grade performance. Depending on Willard is safe because every Willard Battery is built to ONE standard of quality—the traditionally high WILLARD standard. When you buy Willards, you buy TRUSTWORTHY quality.

MARINE BATTERIES

Willard

ARMY E NAVY

Awarded Cleveland Plant, Willard Storage Battery Company

Automobile • Truck & Bus • Radio • Motorcycle • Tractor
Aircraft • Charge-Retaining • Marine • Diesel • Stationary

... the power to carry on!

WILLARD STORAGE BATTERY CO. • CLEVELAND • LOS ANGELES • DALLAS • TORONTO

Peace and rest at length have come

All the day's long toil is past

And each heart is whispering "Home,

Home at last"

THOMAS HOOD

SUPERIOR ENGINES
Division of
THE NATIONAL SUPPLY CO.
Plant and General Sales Office:
Springfield, Ohio

Popularity of Frozen Foods Will Increase Fish Demand

AN appraisal of the sales possibilities of quick-frozen foods indicates that the fishing industry can anticipate a greatly expanded market for its products. This demand not only will take up present productive capacity that was increased to meet war-time needs, but will provide an outlet for still larger catches in the future.

In fact, it is possible that with the great expansion of the frozen food business, fish consumption could be increased to two or three times its present level. It has been predicted by some authorities that with the exception of the frozen food business, the fishing industry in the next decade will show the most remarkable growth of any segment of the food industry.

There are at present 6,730 fish markets in the United States, 156,540 stores which sell some fish part of the time and 377,279 food stores which sell no fish at all. When sufficient frozen food cabinets become available to supply all the food stores in America, there will be a potential quick-frozen fish outlet of 560,549 stores.

During the war, the potentialities of the quick-frozen food industry became increasingly apparent and a concerted movement toward this form of food processing was started. There is no standing still in the quick-frozen food business. All the major manufacturers of household electrical equipment are putting storage units on the market and packers are increasing their output. New stores handling nothing but quick-frozen foods have come into existence. Fish has increased in popularity in recent years and there is no reason why it can not find added acceptance in the quick-frozen food market. Attractive packaging and comprehensive advertising should stimulate sales to a new peak.

Display of quick-frozen fish processed by Booth Fisheries Corp.

As far back as 1929 Frigidaire attempted to pioneer the "home freezer" following the idea of hunters and fishermen who converted ice cream cabinets to store their catch. However, the idea failed to click and the company withdrew its models. Ten years later the Deep Freeze Division of Motor Products Co. attempted to educate the public in the use of home freezers with small success.

At that time frozen foods were on the market, including quick-frozen fish, but refrigeration equipment was so expensive that growth of the industry was impaired by the small return on investments. All this was changed by the war. Housewives went into defense work with the result that they had less time in which to prepare meals. Quick-frozen foods eased their problem and became a boon to women all over the country.

From 1937 to 1944 the total production of quick-frozen food jumped from 205 million lbs. to 790 million lbs. The industry had taken birth and was enjoying a healthy infancy. Despite food shortage it grew steadily throughout the war.

The future is indeed a bright one with a present yearly retail sales volume of $200 million and a predicted increase to $10 billion by 1955. The eyes of the country are eagerly watching the latest developments.

Facts and Figures

An interesting forecast of the industry's growth within the next five years was presented in the August issue of Quick Frozen Foods Magazine.

	1945	1950
packers	450	3,000
locker plants	5,500	25,000
home freezers	165,000	10,000,000
retail outlets	35,000	250,000
institutional users	200,000	1,000,000
new distributors	1,200	10,000

Approximately 130 firms are manufacturing home freezers. With 165,000 now in use the estimated sales within the next two years are set at 900,000 to 1,500,000 units. The pre-war production of quick-frozen foods of 1 billion lbs. was tripled in 1943. From July 1944 to July 1945 the number of locker plants increased 1,182 with a present total of over 5,000.

Improved Methods and Equipment

Since its modest beginning in 1930 the industry has come a long way with major improvements in all its four interdependent branches: processors, retail outlets, home freezers and lockers. The processors have developed a product that rivals fresh food for taste and surpasses it for convenience. Add to this the neat packaging which not only is attractive to the consumer but which also permits a large volume to be stored in a minimum of space. Retail outlets are getting modern storage compartments and show cases that are masterpieces of refrigeration engineering thus enabling them to serve the public with an ample supply of all types of frozen foods. Many are incorporating house to house delivery service filling telephone and mail orders.

National advertising of home freezers and refrigerators with built in units speaks for itself. Likewise, nothing need be said about the locker plants which have proven themselves in rural communities during the war.

Transportation also has taken a long stride in developing equipment that will insure safe and speedy delivery of frozen foods. Not only is this true in connection with rail and truck transportation but also with air and water transportation.

All this material has covered quick-frozen foods in general. Nevertheless, quick-frozen fish is included and at present is a subject of considerable interest. With the quality at landing time indefinitely preserved, the large scale possibilities are being seriously considered not only by this country but other countries as well.

Quick-frozen fish has been on the market since the 1930's but there has been a lack of concerted enterprise behind it. By retail outlets offering fish along with other frozen foods the present potential market may be awakened, particularly in inland areas where fresh fish is often of doubtful quality by the time it reaches the consumer. For example a frozen food locker plant in Casper, Wyoming offered its customers quick-frozen fish in three varieties a year ago. Now due to popular demand it carries 35 to 40 varieties selling over 200 lbs. a week.

A new line of exclusive specialties soon to make its appearance in the quick-frozen seafood market includes such items as lobster Newburg, seafood Poulette, curried shrimp and New Orleans shrimp gumbo. Fishery products are most satisfactory for preparation as pre-cooked frozen foods for their flavor and texture become well preserved. The U. S. Fish and Wildlife Service has been experimenting with numerous "dishes" in its laboratory at Seattle, Wash.

Due to the shortage of other foods during the war people turned to fish and seafood as a substitute for meat. For the first time in their lives many ate fish and found it a delicious food. These people will continue to demand fishery products in all varieties and will help to augment the market for the quick-frozen product.

During the last few years, the fishing industry has constructed many modern processing, packing and freezing plants, up-to-date handling machinery and improved systems of freezing have been developed. New types of wrapping and packaging with added consumer appeal have been utilized. As a result, facilities are available in all leading ports for the efficient production of quality products, and the industry is ready to capitalize on the predicted boom in quick-frozen foods.

New Trawler "Bay" Has Fluid Drive On Winch Engine

Large Capacity, Supercharged Power, and Central Heating System Are Features of O'Hara Bros.' 106 Ft. Steel Vessel

THE new 106'6" welded steel trawler *Bay* built by John H. Mathis Co., Camden, New Jersey, was delivered to her owner, O'Hara Bros. Co. of Boston, Mass., this month. A duplicate sister ship, the *Rush*, launched October 31, will be completed shortly. The *Bay's* skipper is Capt. James Abbott, while Maurice Doyle is mate and Alexander LeBlanc, chief engineer. Carroll McGray is port engineer for O'Hara Bros. and Nick Flaherty is port captain.

Designed by John G. Alden of Boston, to meet American Bureau of Shipping specifications, the *Bay* is modern in every respect. With unusually large capacity, ample power and commodious quarters for a full trawler crew, the vessel has an arrangement that is compact, yet thoroughly accessible. A new type hull design makes the *Bay* a big vessel for her dimensions. Her beam is 23', draft is 12' and depth is 13'2".

She has proved to be a fast vessel with exceptionally good maneuverability, and her lines present a very trim appearance. During her trial runs, she made a speed of 11 knots.

Fo'c's'le Heated from Engine Room

The fo'c's'le companionway, with port and starboard doors, is located under the whaleback. There are 12 bunks forward, and individual lockers for each man are placed on the after bulkhead. These quarters are heated by two overhead radiators piped from the York-Shipley hot water boiler in the engine room. The heating system has a circulating pump and operates at 220° under 15 lbs. pressure. The pipes are run through the concrete in the fish hold where they are packed with 8" of cork.

There is a large escape hatch trunk with oil skin locker space, which is entered through a door from the fo'c's'le. A fan over this door, in addition to two ventilator pipes extending to the whaleback deck, provide ample ventilation.

She carries 2,500 gallons of fresh water under the fo'c's'le floor and 250 in the engine room for the galley.

Under the whaleback there are two toilets starboard and two wash bowls port. There is hot and cold circulating water throughout the ship. An Aurora pump is used for fresh water and sanitary service.

Provision for Trimming

Provision is made for trimming the vessel through the installation of an extra-range fuel tank forward of the fish hold, and a void for water located between the water tank and collision bulkhead at the peak.

The *Bay* has a tripod foremast, and is equipped with a 300-pound Danforth anchor and Edson deck pumps. She carries

Maurice Doyle, left, mate on the "Bay"; and Capt. James Abbott, skipper.

two 18' Lane metallic life boats of 155 cubic feet, 15 person capacity.

Magnesite floor covering is used on the forward deck, while the quarter decks have Stoneoleum protective coating, which provides a non-skid surface that is flexible and self-healing.

The fish hold, which has a capacity of 230,000 lbs., is sheathed with 1¾" planking fastened with electric welded studs to stiffeners and frames. Seams are caulked and paid with marine glue, and stanchions are galvanized. Cork insulation of 4" thickness is used.

Good Visibility from Pilot House

The pilot house has large windows and port lights in the doors, which offer excellent visibility. There is a folding chart table over the seat locker, and the running light panel has emergency fuses which cut in automatically.

The stateroom has two windows on either side and is fitted with a sink, locker and built-in chest of drawers. The windows are balanced with steel strap suspension.

The vessel is equipped with Kelvin-White compass, 50-watt Hallicrafters radio telephone, Bludworth direction finder and Submarine Signal Fathometer. Steering gear was furnished by Edson and consists of their Model 3A reduction gear unit with rudder indicator, and 42" quadrant. Steering cables are in pipes through the after staterooms.

New Type Engine Telegraph

This trawler is equipped with the new Teleflex system of engine order telegraphs. The transmitter in the wheelhouse

Below, left, the Submarine Signal Fathometer and Bludworth direction finder in the "Bay" pilot house; center, the Hallicrafters telephone in the stateroom; and right, a view of the galley.

of the reply type and is fitted with a dial having all numerals and letters filled with a radium luminous compound which is free from power failure. A feature of this installation is that it uses a special cable which slides within a closely fitting brass conduit. Where the conventional type of telegraph requires four lines of cable for a reply system this system needs only two because of its ability to operate in both tension and compression. This new method of operating a special type of cable within conduit obviates the necessity for carefully aligned sheaves and pulleys, wire guide rollers, turn buckles, and slack wire compensators.

Winch Powered Through Fluid Drive Coupling

Directly below the pilot house on the main deck level is the winch engine room, containing a 90 hp., 1200 rpm. Cummins HI600 Diesel which drives the New England trawl winch.

The engine is mounted on a combination engine foundation and reduction unit designed and built for this application by New England Trawler Equipment Co. Between the engine and the reduction unit is a gyrol fluid coupling built by American Blower Co.

Between the reduction gear and the winch there is a full floating intermediate shaft to take care of any misalignment caused by the flexing of the ship in rough weather.

The engine speed can be controlled by the winch operator, and the handling of the trawl doors, bag, and messenger wires is similar to that experienced when an electric winch is used. In addition, this drive prevents stalling of the engine when the boat is rolling in heavy weather. Without the drive, an engine of about 120 hp. would be required, and it would be also necessary to run the winch at slower speeds. This is one of the first installations of its type to be made.

The winch engine has a Sperry Products hydraulic throttle control, Reliance tachometer and Burgess exhaust snubber, and is started by 32-volt Surrette batteries.

Completely Enclosed Winch

The trawl winch is a new WF80 "Highliner" New England worm gear drive model with a capacity of 435 fathoms of 1" diameter wire rope per drum.

The bedframe and gear case are one integral unit, and the bedframe forms a complete enclosure over the winch. The entire frame has been metallized with a coating of zinc to prevent corrosion. The underside of the winch which is inaccessible to painting, has been coated with bitumastic paint. There are ball bearings at six different points in the winch, the drums are all sealed, and the brake block is of heavy asbestos.

At the after end of the winch engine room there is a toilet and shower. Entrance to the winch room is provided on the port deck and from the main engine room below. The galley, located in the after end of the deck house, has a door opening under the turtleback, and a companionway to the passageway below which connects the after quarters and engine room. There is a large refrigerator, a No. 135 Shipmate range, circulating water and an emergency hand pump. The lazarette hatch is aft of the deck house.

The after quarters comprise two staterooms, each with two bunks, sink and sliding door. They are occupied by the mate, cook and two engineers. All interior sheathing is of plywood.

Supercharged Main Engine

Propulsion power is furnished by a supercharged, 6 cylinder Atlas Diesel developing 550 hp. at 300 rpm. The engine is fitted with a Condenser Service heat exchanger, Kingsbury thrust bearing, Maxim silencer, Alnor pyrometer and Weston tachometer. It swings a 74 x 52 Columbian propellet on a 6¾" forged steel shaft with Micarta stern bearing, and drives a 10 kw. Bromfield tail-shaft generator.

The auxiliary power unit is an EHS10 Deseco 110 volt set comprising a 2 cylinder, 16 hp. Lister-Blackstone Diesel with V-belt driven 10 kw. Imperial generator and Kinney clutch operated Marine Products R200 pump and Curtis 2 stage compressor. Batteries are 110 volt, 272 ampere hour capacity Willard.

The new 106' steel trawler "Bay" coming into Boston Fish Pier.

The engine room layout permits easy access to all machinery, and there is an overhead trolley with chain fall for piston removal built into a trunk in the winch engine room floor. The exhaust trunk has ventilation louvers and is fitted for use as an escape hatch. The vessel is furnished with C-O-Two portable fire extinguishers.

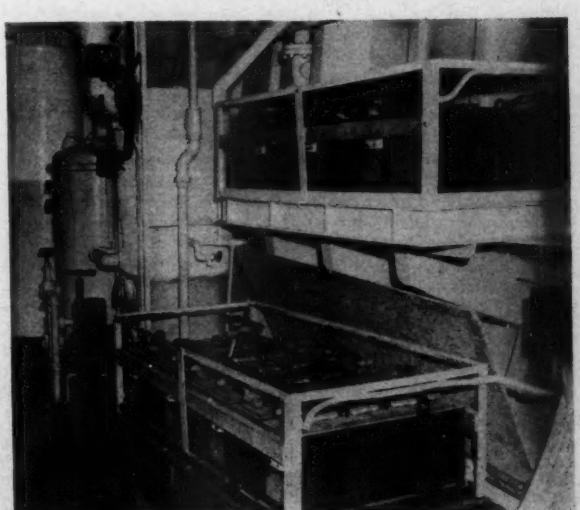
The *Bay* carries 10,000 gallons of fuel oil, and both fuel and lubricating oil are filtered with Briggs clarifiers. A Viking pump is used for fuel transfer.

Adequate Pumping System

The vessel has a fish hold pump and a bilge pump operating off the main engine, as well as two electric Marine Products pumps for general service, fish hold and bilge. A Wesco pump is used for fish washing, and takes salt water through the fire main.

Piping is so arranged that three pumps, the main engine bilge and fish hold and auxiliary hold units, can be hooked in on the fish hold service. In an emergency, all pumps except the main engine bilge can be connected to the fire main.

Bilge pumping suctions are provided in the fore peak, at the coffer dam, in the after peak and at two points in the engine room.



View in the "Bay" engine room, showing her Willard batteries, York-Shipley heater and Briggs lube oil clarifier.

The Maintenance of Lubricating Oil By Filtration

By Walter C. Bauer, M. E.*

THE conscientious operator of any precision built machine is vitally concerned with its operation and, as efficient operation usually depends on the satisfactory lubrication of its moving parts, equally concerned with the quality of the lubricant being used. The operator's entire concern with lubrication can be summed up in just one quality of the lubricant—"lubricity". Webster defines "lubricity" as "smoothness, also that property that diminishes friction", with a hundred percent lubricity there would be no friction; no friction—no wear; no friction—no heating; no friction—no problems of lubrication and no problems of oil maintenance. Unfortunately there is no lubricant with 100% lubricity, nor is there a standard for the measurement of "lubricity"; there is no approved A. S. T. M. method to even approximate a comparative value of this quality in different lubricants. Lubricating oil is sold and purchased and used for its "lubricity" value, and with no standard measurement of this primary value available.

The designer of the machine or engine calls on his past experience or on a series of tests of the completed unit and determines the lubricant that, to his best judgment, gives the best overall performance. Limiting specifications of viscosity, viscosity index, flash, fire, pour point, Conradson carbon, and possibly oxidation stability for the oil are written and issued to the ultimate user of the machine for his guidance in securing the correct lubricant. If the machine or engine is not in the high output, highly stressed class this recommendation may be reduced to merely an S. A. E. number. Again, and this is current practice in the Diesel engine field, the engine builder surveys the oil market, determines which oils by "brand" name meet the limiting specifications and issues this "approved oil" list to the operator.

The maintenance of the lubricant in different types of machinery each present different problems, though the type of oil used may be the same.

All machinery contaminates oil differently and requires variable oil maintenance equipment, though basically the requirements are the same:—to maintain the oil as closely to the new oil specifications as possible.

Methods of Oil Maintenance

By analyzing the results of many years research the reasonably safe limits for both the physical and chemical contamination of the oil in an internal combustion engine have been established. The basic problem then, in lube oil maintenance, for this particular application, is to apply the mechanism to keep the oil from contaminating past these limits.

There are three ways of accomplishing this result: First—Drainage and recharge with new oil. Second—Drainage and batch reclamation. Third—Continuous clarification. The first method, drainage and recharge with new oil, is the method usually employed.

On most Diesel engines it would only be very few hours (2 to 6) for the physical (dirt) limit to be reached. On natural gas engines it takes from 50 to 200 hours—then the limit would be chemical contamination (neutralization number).

Without constant laboratory checks as to oil condition periodic oil draining and refilling with new oil is not the answer to reasonable certain and safe lubrication maintenance. In an effort to be safe in their lubrication practice some operators make it a practice to make very frequent oil drainages; clean and recondition this oil in batches and return it to the engine. This practice again requires strict laboratory control, not, however, to check the oil in the engine but to check each batch drained and to prescribe the needed treatment to restore the oil to specification. The ultimate result of this method of lubrication maintenance is apt to be better than that obtained by the more extended operation between drainings and with the overall lubrication cost at least equal.

Continuous oil maintenance can only be successfully accomplished when each individual machine has its own oil maintenance equipment. To do the job with the minimum operational expense and with least service attention these units cannot be too small. Space limitation on mobile equipment seriously limits the extent to which proper size units can be used in this service. In stationary practice the results achieved have been very gratifying.

Normal continuous lubricating oil maintenance consists of adapting various filtering media to the machine's oil stream. The visible or physical contamination can be removed from the oil by a number of fibrous materials ranging from pulverized corn cobs to the finest grades of processed filter paper. The removal of this finely suspended matter from an oil stream is not done by straining through very fine orifices but rather by that physical filtering characteristic called "absorption".

Filtration By Absorption

This phenomenon can best be illustrated by suspending a strip of blotter into an ink well. The blotter will become wet considerably further up the strip than the ink discoloration will rise. By "absorption" the blotter has stopped the pigment in the ink. Such filtering will remove from the oil stream dirt particles much smaller than the 10 micron size (.00039). However, this is a process that cannot be rushed. The flow rate of the liquid through the filtering media cannot exceed capillary flow rate: —roughly 3½ inches per minute for liquids in the viscosity range of 140 to 160 S. U. S. This means that for each gallon per minute passing through the filter approximately ¼ of a square foot of capillary orifices in the filtering surface must be provided. This usually means 1½ to 2 square feet of bed area.

The problem of filter bed depth cannot be settled as arbitrarily as area. A dense bed will stop more dirt per inch of depth than will a courser one. It also requires either hotter oil or greater pressure to pass the liquid through it. The question as to the quantity and the quality of dirt that will be retained or absorbed by a cubic inch of a dense or open filter bed, or by this or that fibrous material is a moot question.

It has been stated that the flow rate through a fibrous filter bed must be at, or slower than capillary flow rate if "absorption" retention of dirt is to be secured. If sufficient pressure is applied to force the liquid through the bed in excess of that flow rate, or the flow rate is maintained with the viscosity of the oil too high, "back-wash" of the filter bed will occur.

The requirements for the successful application of absorptive filtration can be summarized as follows:

1—Sufficient filtering area must be provided so that the flow rate through the filtering medium is below the capillary flow rate of the liquid being filtered.

2—Sufficient depth must be had so that the necessary dirt absorption can be accomplished.

3—The filter must be large enough to have sufficient dirt capacity for all the dirt being generated in the oil over a reasonable period of time.

4—Provision must be made so that surges in oil pressure, oil volume, or increases in oil viscosity do not "back-wash" the filter bed.

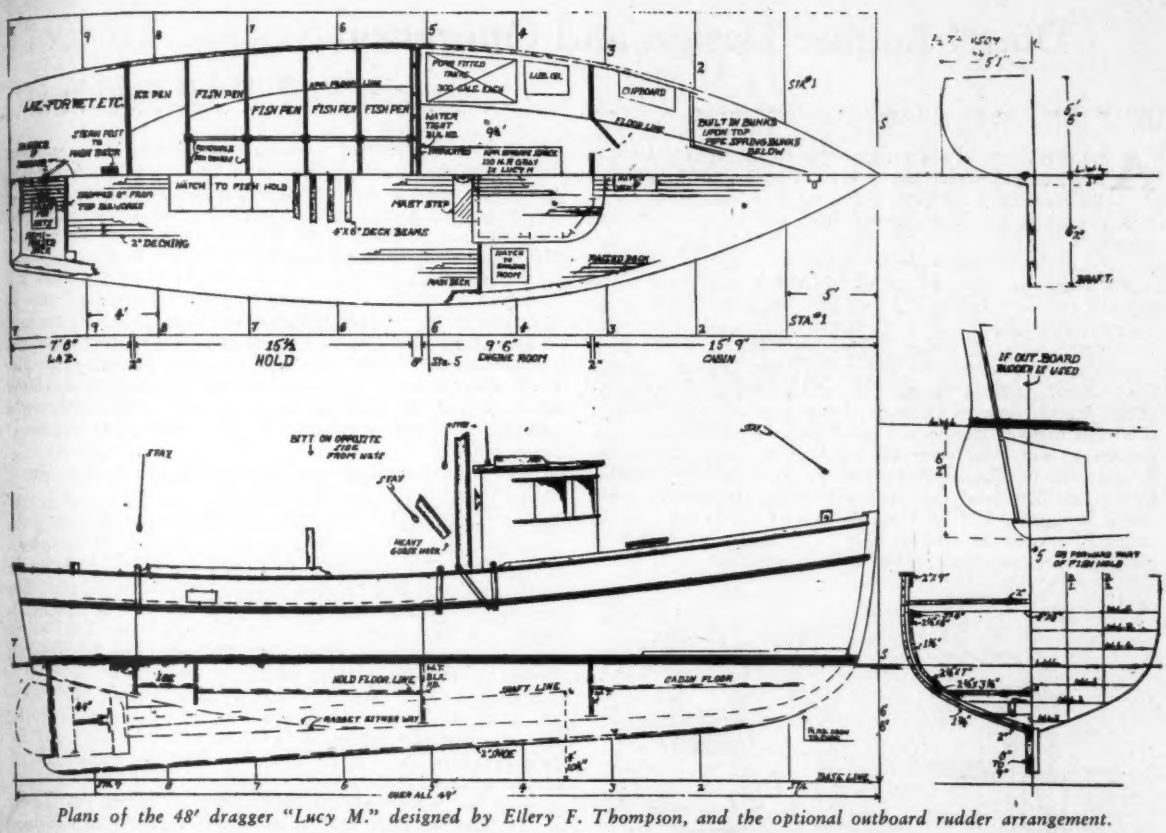
Adsorptive Filtration

The chemical contamination of a lubricating oil (the invisible contamination) consists of the gums, the resins, the organic acids, and the asphaltines that are formed either by partial oxidation and partial "cracking" of the oil itself due to the conditions under which it must function. These contaminants are generally acidic in reaction and hence laboratory determination of the neutralization number is usually a good index of the quantity present. Certain clays—of which Fullers Earth is the best known—have the property of having a greater surface affinity for these contaminating unstable hydrocarbons than for those stable hydrocarbons which form the oil itself. Since this is a contact phenomenon, flow rate is not as important as contact surface and filter depth.

Adsorption filtration is not as critical to filter design or to application as absorption filtration in the actual filtration problem. However, in the actual handling of the adsorptive filter-

(Continued on page 45)

* Excerpts from a speech delivered by Mr. Bauer, chief consulting engineer for the Briggs Clarifier Co., before the Washington Section of the Society of Automotive Engineers.



Plans of the 48′ dragger "Lucy M." designed by Ellery F. Thompson, and the optional outboard rudder arrangement.

48 Ft. Dragger Designed for Greater Seaworthiness

THE 48′ dragger *Lucy M.*, recently completed by Essex Boat Works, Inc., Essex, Connecticut, was built from a new design by Ellery F. Thompson of New London, who has endeavored to produce an efficient boat with good lines. The vessel is owned by Capt. Henry Mello, Jr., of Point Judith, Rhode Island.

Frequently it has been found that boats of this type have pounded and slapped when running to windward. The new model has more rake on the stem, a narrower stern, refined lines and a sufficiently sharp bow so that she can go to windward wide open and not pound. With a 6′6″ draft, the boat draws more water than average, which feature helps to give her greater seaworthiness. She has a beam of 14′3″.

Ample space is provided for the engine room and for the fo'c's'le which contains 4 bunks and a Shipmate range. The boat carries 100 gallons of water and 600 gallons of fuel oil. Fish hold capacity is 35,000 pounds.

The boat is built with steam bent 2″ x 4″ oak frames, spaced on 10″ centers, and her keel is sided 8″ and molded 4″. Deck beams are 4″ x 6″, spaced 14″, decking is 2″ white fir while planking is 2″ yellow pine. International paints were used.

The *Lucy M.* is powered with a 110 hp. Gray Diesel, fitted with 4:1 Twin Disc reduction gear, and Burgess exhaust snubber. Turning a 40 x 32 Federal Mogul propeller on a 3″ Tobin bronze shaft with Hathaway stern bearing, the engine gives the boat a speed, light, of 11 knots.

Other equipment includes two sets of 32 volt Willard batteries, Hathaway winch operated from the engine power take-off with Twin Disc clutch, C-O-Two fire extinguishers, Roebling wire rope and 75 pound Danforth anchor.

The Essex yard is now finishing a 40′ dragger for Capt. Melville Strout of Wakefield, Rhode Island which will be powered with a 110 hp. General Motors Diesel with 3:1 reduction gear. Also under construction is a 60 footer for Capt. Frank Lewis Reis of Provincetown, Mass., to be equipped with a 170 hp. Buda Diesel.

The Origin of How a Ship Became Known as "She"

ACCORDING to the magazine "Ships", of the Shipbuilders Council of America, a seaman thinks of his ship as feminine, but the reason he lovingly labels her "she" is lost in dim antiquity. There are those who facetiously say a vessel is feminine because she requires constant painting, it takes men to handle her, and in port she has a "husband"—an agent who handles business ashore.

There are others who say that because a ship has a waist, bonnets, laces, stays, scarfs, combings, jewels and earrings, and often a "bustle" about her, the gender properly is feminine. Still others insist that the use of feminine figureheads on ships' prows influenced the choice. However, Phoenician and Egyptian boats, among recorded history's earliest, were graced with male animals, to say nothing of dragons and serpents and monsters too ferocious to have been anything but masculine.

Nor can the femininity be accounted for by the gender of the word itself. "Ship" is masculine in French, Italian, Spanish and Portuguese, and possesses no sex in Teutonic and Scandinavian.

During the 17th and 18th centuries vessels were merchantmen, men-of-war and Indiamen. Even as early as 1426 a historian said "Every ship wayed his anker"; 150 years later a treatise mentions that "in a shyppe the Rudder ought to be no lesse than may suffise to direct hys course." Shakespeare pictured a "Shippe boaring the moon with her maine mast". As late as 1784, the authors of the famous "Spectator Papers" recognized the masculinity of vessels, writing that "the last (ship) . . . swallowed up within sight of his own shore."

However, this "he" business was just an episode in the passage of the centuries. The Bible, describing the travels of the Apostle Paul, tells that the disciple "landed at Tyre: for there the ship was to unlade her burden."

Probably as sound a theory as can be offered as to why a ship is called "she" goes back even earlier than the New Testament, to the time of the Greek mariners. They gave their ships feminine names, possibly out of deference to Athene, goddess of the sea.

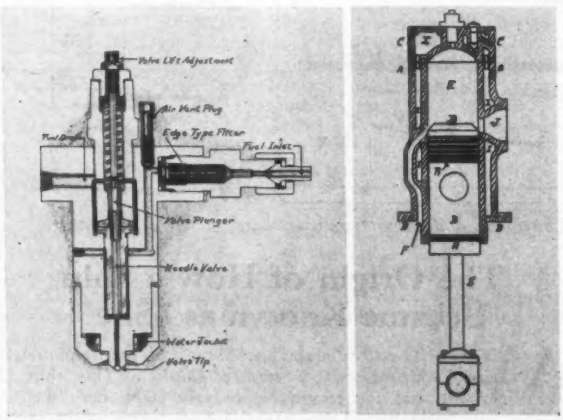
Diesel Engine Design and Operation

By William H. Radcliffe

APPLICATION of the principles given in the two previous articles upon which the operation of Diesel engines and their auxiliary equipment is based will now be taken up with respect to the design, construction and operation of these machines.

Cylinders and Pistons

The engine cylinder, one of the most important parts at the business end of a Diesel, is a cast iron barrel as shown in the sectional view, Fig. 7, at *A, A*. It must be strongly constructed to resist the stress of the gas pressure between the piston *B, B*, and the cylinder head *C, C*. The cylinder head is securely bolted to *A, A*, which has a flange *D, D*, at the bottom for fastening to the engine frame. The inner part or liner *E* of the cylinder is of thin smooth close-grained metal specially chosen for its resistance to wear. To carry off the heat of combustion in the cylinder, the surrounding passages *I*, are provided for circulating cold water. Air from the crank case enters through the cored intake passage *F*, then up along the side of the cylinder, across the under part of the cylinder head *C, C*, and leaves by way of the larger port at *J* and out the exhaust manifold.



Right, Fig. 7 showing a cutaway cylinder block and left, Fig. 8 showing a sectional view of a fuel injection valve.

The manifold in its entirety is an oblong pipe which runs along the side of the engine close to the cylinder heads and serves as a common out-take for the exhaust gas from the different cylinders in the engine, in place of a separate out-take from each one. It is made up of short sections which are cast with a water jacket through which when joined together circulates the cooling water from the cylinder jackets before it is discharged overboard. Cooling the exhaust keeps the engine room temperature down and aids in muffling the noise of the exhaust by reducing the gas volume.

The cylinder head, *C, C*, Fig. 7, is a hollow close-grained iron box requiring very careful construction, particularly in a four-cycle engine, as through it pass the operating valves actuated by their respective springs and rocker arms within a small space, and it is also subject to heavy stress because its lower part is next to the heat and working gas and its upper part next to the cooling water.

The piston *B, B*, Fig. 7, in most small engines is of cast iron and is usually slightly more than twice as long as its diameter. It may have a flat or convex crown which generally varies in thickness with the piston diameter, due to the fact that increased diameter means more heat and thus requires more metal to carry it off. Near the upper end of the piston there are a half dozen or more piston rings *R*, Fig. 7, which fit into grooves in the piston to make the piston and cylinder walls gas tight. They are of square section flexible metal, their elasticity enables them to adjust themselves to the contour of the cylinder walls, maintain an even tension, tight fit, and withstand wear. Dowel pins set in the piston prevent the rings from turning in the grooves. In some pistons there are also one or two rings *H* near the bottom which serve as scrapers to keep excess lubricating oil from the crank case getting into the cylinder and carbonizing from the heat, thus gumming up the cylinder walls and piston particularly where the splash system of lubrication is used.

The connecting rod shown at the lower part of Fig. 7 at *S* is of soft steel capable of withstanding severe shocks, and may be of round or of I-shaped cross section. Its upper end is fitted with steel piston-pin bushings lined with babbitt metal and the lower end carries removable steel crank-pin bearing shells also lined with babbitt metal. The four-bolt fastening of the latter not only facilitates accurate adjustment but enables both piston and connecting rod to be removed without disturbing the crank-pin bearing.

Crank-Shaft and Cam-Shaft

The crank-shaft, which is practically the backbone of any marine Diesel engine, is a solid forged steel shaft. It rests in the lower base provided with rigid bridges to support the intermediate bearings. The connecting rods from the cylinders drive the shaft at the pins, each of them balanced by counter-weights. The pins on the crank-shaft are mounted on the shaft at equidistant angles from each other for uniform driving power. Thus in the two-cycle, five-cylinder crank-shaft, adjacent pins are mounted around the shaft at intervals of 72° or one-fifth of 360°.

Similarly, for a two-cycle, three-cylinder engine, the crank-pin arrangement would be at angles of 120° around the shaft; for a four-cylinder engine, 90°; for six cylinders, 60°; and for eight cylinders, 45°. In a four-cycle engine the crank pins are usually arranged in the order just noted, if two-cylinder or three-cylinder, but in four-cylinder engines they are spaced 180° apart; in six-cylinder engines, 120° apart; and in eight-cylinder engines, 90° apart around the shaft. The cam-shaft driving gear and the eccentric for driving the air compressor are mounted at one end of the crank-shaft.

The cam-shaft is driven by spur gear from the crank-shaft and revolves at full crank-shaft speed in a two-cycle engine, and at half the crank-shaft speed in a four-cycle engine, because in four-cycle engines there are two revolutions for each cycle. The cam-shaft turns in a series of bearings supported by bridges in a housing which is integral with the upper base, lubrication being supplied from the pressure system. In some models, the cam-shaft is arranged parallel with the crank-shaft while in others it is located transversely at the after end. Cams or projections move push rods up and down opening and closing the fuel injection and air-starting valves in the cylinder head to operate the engine, these cams being arranged on the cam-shaft so the valves operate in proper time and sequence. The driving gear at one end operates the fuel injection pump, air-starting mechanism and forcefeed lubricators, while the governor-drive bevel gear is mounted at the other end of the cam-shaft.

Governor, Flywheel and Fuel System

The governor regulates the speed of the engine and functions principally when the boat is pitching and the propeller partially lifted out of the water. The racing of the engine due to the reduced load upon it in such a case is prevented by the governor which is usually set to act if the engine speed increases more than 10%. It acts usually through fly-ball action on a regulating mechanism that controls the fuel system.

The flywheel is another auxiliary on an engine to keep its speed of rotation regular during the intervals between the turning impulses on the shaft. It is particularly important in single-acting, four-cycle Diesel engines where the shaft receives only one-half an impulse per cylinder per revolution, and in the single-acting two-cycle engine with one impulse per cylinder per revolution, and must be heavier than in the double-acting engine or where more cylinders are employed. For example, six-cylinder, two-cycle engines directly connected to the propeller shaft often dispense with a flywheel entirely on account of the frequent turning impulses and the considerable flywheel effect

(Continued on page 43)

Floating Shrimp Freezer "Betty Jean" Is Success

C. W. DuBois, Technologist, Describes How Processing at Sea Reduces Loss of Shrimp and Assures a Better Quality

THE *Betty Jean*, first floating shrimp processing and freezing plant to appear on the Gulf of Mexico, is a forerunner of newer types of shrimp trawlers that are expected in the near future. This development reflects the trend in the thinking of boat owners, boat designers and builders and refrigeration manufacturers.

The size of the boats has gradually been increasing over the past few years as a result of the findings of the habits of the shrimp. It was found that "jumbo" or large shrimp were found in abundance many miles off the coast. Because of weather conditions and the depths to which the trawl must be pulled, it was necessary to have bigger boats that were more seaworthy and more powerful to manipulate the trawl.

During the Summer months of 1943 and 1944, there were exceedingly high losses of shrimp due to lack of refrigeration necessary to preserve the shrimp from the time they were caught until they were delivered to the shore processing plants. The refrigeration has been furnished entirely by crushed ice, and the fishery is from 25-100 miles from the shore plants. Any miscalculation may mean the loss of the entire catch of one trip of the boat. Some of the progressive men in the industry began to investigate means of improving the handling methods.

The freezing boat, *Betty Jean*, a remodeled boat, is owned by Guy C. Lewis of Westwego, Louisiana. It is 65 feet in length, has a beam of 22 feet, and a draft of about 6 feet. She has three decks—a hold, the back portion of which consists of an engine room, the forward portion or about half the deck being converted into a freezer and refrigerated storage; the main deck, upon which the trawling and processing equipment is installed; and a small hurricane deck, the forward portion of which is the pilot house and sleeping cabin, and the remainder of which is open and used for storage of fuel, water, etc.

Refrigeration Equipment

The entire refrigeration installation was engineered by J. L. Rumold, refrigerating engineer of the Jordy Engineering Co., New Orleans, La. A special plate freezer was built about in the center of the boat, from the hold deck extending upward beyond the main deck for about three and a half feet. The top of this freezer is clad with metal and can be used as a table during the processing. The center of the freezer is an aisle with plate freezing shelves on each side, enclosed in a cabinet with an individual door for each shelf. There are 14 plates on each side, placed five inches apart. Dole plates were used and they are 22″ x 108″. The entire freezer section measures 120″ by 23″ by 7′ high.

Forward and to each side of this freezer compartment are spaces designed for frozen storage. Likewise this section is refrigerated by 11 Dole plates, measuring 22″ x 108″. The storage compartment consists of 1200 cubic feet. Because of the advantages of its being water, vermin and decay-proof, Fiberglass AE board was chosen as the insulating material. It was installed in the usual manner, using 8 inches on the freezer and 6 inches on the storage. The storage hold and freezer are connected by a door, and an insulated trap door is used for entrance into the hold. From the main deck there is a small "pass" door which opens into the freezer at the forward end.

A York V-type compressor is mounted on the main deck immediately to the rear of the freezer, directly above the engine room, and driven by V-belts from the direct shaft to the Fairbanks-Morse Diesel. F-22 was chosen as the refrigerant because of the advantages of its being non-toxic and non-inflammable. The refrigerant is condensed by using seawater pumped through the condenser. A special water condenser, designed by Mr. Rumold, is mounted in the engine room. This condenser contains nickel tubes to reduce to a minimum any possibility of corrosion by seawater. A 50-gallon per minute centrifugal pump is mounted in the engine room and connects to the compressor belt shafting, for positive operation. Efficient cooling is obtained as indicated by there being only a 3° F. rise in temperature of the water as it passes through the condenser.

The "Betty Jean", a floating plant for the complete processing, freezing and storage of shrimp, is the "mother ship" of 100 or more small craft fishing for shrimp in the Gulf of Mexico.

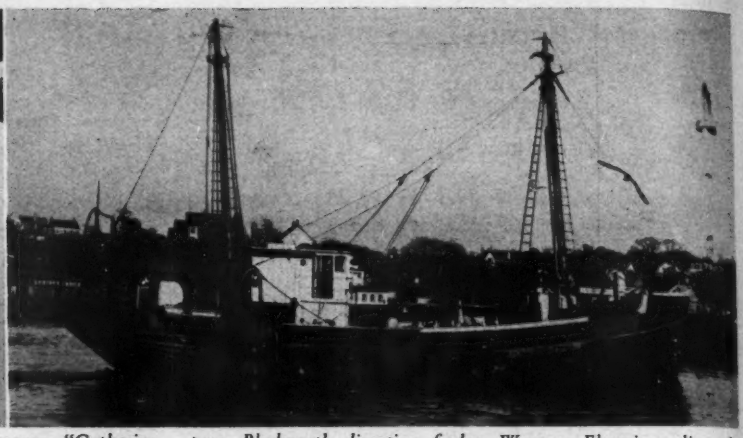
Operation of Boat

The *Betty Jean* is equipped to trawl for shrimp. However, part of the time this boat purchases additional shrimp from other boats and processes shrimp from the boats in the remainder of Mr. Lewis' fleet. Some of the shrimp are purchased with the heads already removed. They are washed in seawater, packaged and weighed, and then placed in the freezer to be frozen. Other shrimp are brought in with the heads still intact. The heads are removed by members of the crew. The shrimp are then processed, and are frozen solid within 8 hours of their introduction to the freezer. Usually the next morning these frozen shrimp are transferred to the refrigerated storage hold. The freezer has the capacity of 10,000 pounds per day, and the storage compartment is calculated to hold 30,000 pounds of shrimp.

The boat uses a 70 hp. Caterpillar Diesel engine for propulsion. A 30 hp. Fairbanks-Morse Diesel engine is so coupled that it can be used for auxiliary propulsion or to run the refrigerating plant.

Based on the interest that has been shown in this boat, the *Betty Jean* is a forerunner of newer types of shrimp trawlers that may be seen on the Gulf in the near future. There are a few trials under way using mechanical refrigeration rather than using ice, and there are other proposals whereby the boats will be equipped with small refrigerating units to freeze the catch as it is prepared on board the boat in the Gulf. This is one step in the direction toward the solution of the problem of placing higher quality shrimp on the tables of consumers far from the fishing grounds.

On the West Coast the Defense Plant Corporation's *Mormacrey* has been fitted as a floating freezer, crab cannery and offal reduction plant. The floating factory ship will serve a fleet of five 100′ steel trawlers now under construction. They will work the Alaskan waters for crabs and bottom fish in the Summer and the sub-tropics for tuna in the Winter.



Capt Bradford Amirault and his 100′ dragger "Catherine Amirault" of Gloucester, Mass. The vessel is equipped with 400 hp. Atlas Diesel, Columbian propeller, Kelvin-White compass, Bludworth direction finder, Western Electric radio, telephone, Fathometer, Danforth anchors, Columbian rope, Shipmate range and 8 hp. Deseco Lister-Blackstone auxiliary.

Gloucester Draggers "Colombo", "St. Paul" Lost in Storm

TWO Gloucester draggers, the 90′ *Colombo*, owned and skippered by Capt. Jack Barbara, and the 75′ *St. Paul*, owned and skippered by Capt. Phil Parisi, were torn loose from their mooring lines by gale winds and heavy seas on November 30, and were lost in sight of Gloucester Harbor. The *Colombo*, valued at $60,000, sank off White Beach in some 25′ of water, while the *St. Paul*, valued at $75,000, pounded to pieces on ledges south of Dolliver's Neck Life Saving Station. No one was aboard either craft.

Four other Gloucester draggers parted their lines during the blow and one, the *Nyoda*, owned by Capt. Frank Frontiero, smashed against the Independent Fish Co. wharf and was damaged to the extent of $400.

Rockport lobstermen suffered severe financial losses during the storm. Quite a number of them had pots out, most of which were smashed.

Construction Started on Ice Plant

Construction of a new ice-making plant for the Fort Wharf Ice Co., which will have a daily capacity of 300 tons, has been started, and work is expected to be completed by late Summer of 1946. The new plant will have dimensions of 200′ x 110′, and will be modern in every respect with facilities for crushing and delivering ice directly to fishing boats. It should prove a boon to the fishing industry, which for the past two years has been faced with the necessity of seeking ice from other cities to fulfill the demand.

Gill Netters Doing Well

A large fleet of gill netters were pollocking east of Cape Cod the middle of November, and on November 21 a fleet of 9 boats landed nearly 115,000 lbs. at Gloucester. The *Lois T.*, Capt. Peter Tysver, hailed for almost 33,000 lbs. in two lifts over the week-end of November 24.

"Little Joe" Raised

The 62′ dragger *Little Joe*, which sank during October, has been raised. The vessel is owned by Capt. Sebastian Scola, and repairs will be made by the Parkhurst Marine Railways.

November Receipts Show Increase

Gloucester fresh fish receipts for the month of November were 14,202,800 lbs., compared to 10,000,000 lbs. in November, 1944.

Two Boats Fishing out of Norfolk, Va.

Included among Gloucester boats fishing out of Southern ports for the Winter are the *Doris F. Amero*, Capt. Nels Amero, and the *Jorgina Silveira*, Capt. Alvaro Silveira, both of which are fishing out of Norfolk.

"Tamarind" Being Conditioned for Fishing

Capt. Lemuel Firth, owner of the seiner *Three Sisters*, is having the schooner *Tamarind*, which he recently purchased from Capt. Bill McCoy, put into condition for fishing.

Several Big Trips Landed

Several good trips were landed at Gloucester recently, among which were the following: *Joffre*, Capt. Simon P. Theriault, 140,000 lbs.; *Leretha*, Capt. Mickey Densmore, 131,000 lbs.; *V-E Day*, Capt. Lemuel Barnes, 180,000 lbs.; *Curlew*, Capt. Robert Fralic, 180,000 lbs.; *Killarney*, Capt. Albert Williams, 172,000 lbs.; and *Babe Sears*, 115,000 lbs.

Mackerel Catch Value Increases

MACKEREL receipts by hails for the 1945 season totalled 43,150,000 lbs., worth more than $3,000,000 to the fishermen, and showed an estimated 25% increase in value over 1944. Landings were made by a fleet of 51 seiners which brought in 1349 trips at Cape May, N. J., New York, New Bedford, Provincetown, Newport, R. I., Boston and Gloucester from April 10 to November 13.

For the third successive year the *Santa Maria*, co-skippered by Capts. Peter Mercurio and Peter Guarrasi, was the high-liner of the fleet. The seiner had a total catch of 2,152,000 lbs. in 46 trips, and gross stocked approximately $190,000, with a gross share of approximately $10,000 per man. The craft set a new record for the gross stock and share of a mackerel seiner, eclipsing the previous record which was made by the seiner in 1943.

The *Natale III*, Capt. Anthony Linquata, held second place, with a total hail of 1,893,000 lbs. in 38 trips, followed by the *Mary W.*, Capt. Sam Scola, with 1,750,000 lbs. in 38 trips, and the *Frank F. Grinnell*, Capt. Alphonse Mineo, 1,617,000 lbs. in 36 trips.

Boston, with 17,996,000 lbs. in 485 trips, reassumed first place among the seven ports, followed by New Bedford with 11,409,000 lbs. in 300 trips and Gloucester with 10,582,000 lbs. in 458 trips. June production was the highest for any one month, with 11,343,000 lbs. landed in 277 trips.

1945 Trips and Catch of Mackerel Seiners

Santa Maria (46)	2,152,000	Eleanor (24)	792,000
Natale III (38)	1,893,000	Mary M. (30)	785,000
Mary W. (38)	1,750,000	Nancy B. (25)	711,000
Frank F. Grinnell (36)	1,617,000	Famiglia (31)	702,000
Rosie and Gracie (40)	1,582,000	Yankee (22)	682,000
Bethulia (43)	1,546,000	Madonna (23)	680,000
Serafina N. (39)	1,481,000	Jackie B. (Gloucester) (23)	613,000
Linta (38)	1,406,000	Naomi Bruce III (20)	607,000
Antonina (44)	1,376,000	Nyoda (23)	502,000
Jennie and Julia (38)	1,347,000	California (21)	484,000
North Star (39)	1,329,000	Josephine and Margaret (15)	479,000
America (37)	1,318,000	Jennie and Lucia (18)	428,000
Rose Marie (38)	1,291,000	American Eagle (11)	330,000
Capt. Drum (42)	1,269,000	Falcon (16)	304,000
Marjorie (30)	1,210,000	Santo Antonino (7)	192,000
Serafina II (33)	1,107,000	Salvator (18)	182,000
Angie and Florence (38)	1,106,000	Natalie B. (9)	177,000
Carlo and Vince (33)	1,103,000	Avocet (10)	163,000
Ida and Joseph (36)	1,062,000	Madeline (12)	144,000
Gloucester (29)	1,018,000	Njorth (10)	134,000
Rose and Lucy (35)	985,000	Poseidon (14)	126,000
Alden (29)	979,000	Jackie B. (Me.) (7)	83,000
Frankie and Rose (29)	972,000	Aliburton (8)	80,000
Saint Joseph (24)	932,000	Sarah M. (9)	50,000
Three Sisters (38)	924,000	Roma II (1)	3,000
Beatrice and Rose (23)	862,000		

Maine Lobsters Flown to Los Angeles

THE first full cargo shipment of lobsters ever to be transported from coast to coast by plane left the Eastport Airport on December 9, with arrival expected in Los Angeles 17½ hours later. The 5,000-pound shipment of live lobsters, handled by the Frank R. Neal plant, was packed in seaweed, without ice, since refrigeration was obtained by altitude flying. Stops for refueling were scheduled at Portland, Dayton, Ohio, and Oklahoma City, Okla. The plane, a converted Douglas DC3 passenger transport craft, is owned and operated by the Pacific Air Cargo Service of Los Angeles.

When asked if the shipment was an experiment, Roy Fontaine, representing the Jordan Lobster Co. of Fulton Market, New York, owners of the shipment, stated that his Company plans to make shipments from Eastport a permanent service. He pointed out that the experimental effort had been made previously when two barrels of live lobsters were shipped from Newark, N. J. to Los Angeles, arriving in perfect condition.

USDA Ends Set-Aside on Sardines

The Department of Agriculture announced November 20 that canners of Atlantic sea herring, including Maine sardines, will not be required to reserve for Governmental use any part of their packs processed after November 10. This is provided in amendment No. 16 to War Food Order 44. Continued reductions in the quantity of canned fish needed for the armed services make this action possible.

Storm Damage Extensive

Driven by a 55-mile east-northeast gale on November 20, huge waves smashed at Maine waterfront structures carrying several buildings away, and many piers lost sections or collapsed. Damage to weirs and fishing gear was extensive except at those ports which are protected. At Eastport, where the tide reached a height of 28′, damage was estimated at $200,000.

Activity in the Eastport sardine factories, which was curtailed the middle of November by sharply reduced receipts of fish, was brought to a stand-still by the storm, which wrecked practically all the weirs still in operation. The end of the 1945 packing season has probably arrived, unless an unexpected school of fish materializes in some protected area where weirs are still standing or seining is practical.

The unmanned 33′ combination trawler and lobsterman *Duchess*, owned by Ellwood Hanscomb, broke her moorings and sank with her cargo of mussels at Bar Harbor. Henry A. Dyer, Chebeague Island lobsterman, lost a 36′ boat and three dories moored in Coleman's Cove.

At Lubec, several smoked herring plants collapsed, and damage to sardine factories and other waterfront structures was estimated at $100,000. All the weirs at Cutler were destroyed, and the loss was placed at $50,000.

State Pier Improvement Expenditure Approved

The way was cleared for improvement of the State Pier at Portland on November 22, when the Governor and Council approved the Maine Port Authority's request to spend $550,000. The Authority will be permitted to expend not more than $225,000 from its treasury, and to borrow not more than $325,000 additionally.

Mid-Central Co. Purchases "Andarte" and "Evzone"

The two 82′ draggers *Andarte* and *Evzone*, recently purchased by the Mid-Central Fish Co., Portland, from Soffron Bros., Ipswich, Mass., have been outfitted under the direction of Wallace Goudy, shore captain, and expected to start fishing the week of December 3. The vessels have a capacity of 171,000 lbs. Capt. Reuben Doughty, Jr., is skipper of the *Evzone*, while Capt. Charles Dexter is skipper of the *Andarte*.

Three Trawlers Being Reconverted at Snow Yard

Three steel trawlers, the *Storm*, *Squall* and *Flow*, owned by General Seafoods Corp., are at the Snow Shipyard, Rockland, undergoing reconversion from wartime service to fishermen. The three 138′ craft were built by Bath Iron Works Corp.

"Major J. Casey" to Fish out of Rockland

The dragger *Major J. Casey*, of New Bedford, has joined the Rockland fishing fleet. She is owned by Eric Zwinkel of Cutler. Capt. Percy Spurling of Rockland is skipper and Sumner Banks, engineer.

Top row, left to right, Mrs. Manuel P. Domingos, sponsor; Manuel P. Domingos, Sr., of United Fisheries, Gloucester, Mass.; Mrs. Domingos, Jr., Mr. "Jeff" Domingos, Jr.; bottom row, Mrs. Frank L. Sample, Jr., Mr. Sample Jr., and Capt. Fernando Pereira. Below, the "Manuel P. Domingos" before launching at Sample's yard, Boothbay Harbor, Me.

"Manuel P. Domingos" Launched by Sample

The 96′ x 22′6″ x 11′9″ schooner type dragger *Manuel P. Domingos* was launched by Frank L. Sample, Jr., Inc., Boothbay Harbor, Me., on December 5. She is owned by United Fisheries and her skipper Capt. Fernando Pereira of Gloucester, and was designed by Eldredge-McInnis, Inc. Her capacity is 160,000 lbs., and she is equipped with a 300 hp. Atlas Diesel, 16 hp. "Deseco" Lister-Blackstone auxiliary set, New England winch and Willard 110 volt batteries.

Donald G. Wilson Resumes Duties

Donald G. Wilson has resumed his duties as Treasurer of B. H. Wilson Fisheries, Eastport, and Manager of the Sardine Department, following discharge from the Armed Forces.

Start Dragger at Thomaston

Newbert & Wallace of Thomaston have laid the keel for a new 57′ dragger for Capt. Horace W. Devine of Oak Bluffs, Mass.

"Dorothy & Ethel III" Repowered

The *Dorothy & Ethel III* of Portland has been repowered with a new 170 hp. Buda Diesel with 3:1 Twin Disc reduction gear. Both she and her sister ship *Dorothy & Ethel II*, owned by Paulson and Olsen, have been completely overhauled and equipped with new heating systems. Jens Buhelt is Captain and Fred Alley, engineer on the *III*, while Galen Arey and Granville McLeod are Captain and engineer, respectively, on the *II*.

Capt. Andy Martin of the SEWANHAKA watches the Fathometer dial for indications of a fish school beneath his boat.

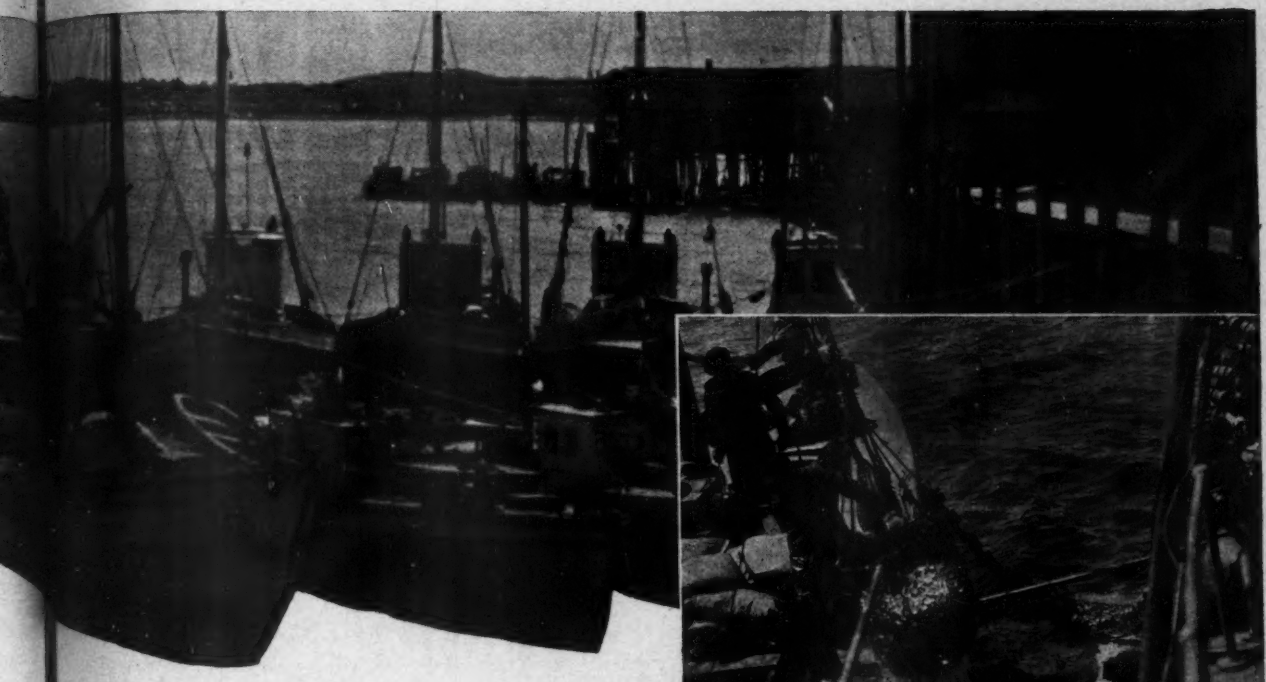
The 90 ft. deep net, having been set under Fathometer's guidance, is laced to the carrier.

"My F FOR

"Believe me, our Fathometer is the most helpful fishing instrument I have ever seen. I can honestly say our extra heavy catches this last year have been due to the way Fathometer has helped us to locate and determine the size of fish schools. With it we have caught so many fish that the R. J. Peacock Canneries have had a difficult time keeping up with us.

"And how the boys of my crew praise Fathometer. They think there's nothing like it for reducing discomfort and increasing shares. No longer is it necessary for them to 'feel' for fish with a weighted copper wire when a raw, northeast wind cuts to the bone. Instead, we watch the Fathometer dial here in the warm

The Fathometer-equipped SEWANHAKA — "Seeing Eye" of the fleet.



Part of the fleet, fishing out of Machiasport, Maine.

A dip-net transfers thousands of herring from the SEWANHAKA'S purse seine, into the hold of the carrier.

FATHOMETER FINDS THE FISH

Reg. U.S. Pat. Off.

ME," says Capt. Andy Martin

pilot house until the red flashes show herring below, and the depth and area of the school. Then we set out nets and fill-up.

"If you could see how the other boats watch us, and follow, you would realize that the Fathometer-equipped *SEWANHAKA* is the 'Seeing eye' of this fleet. When we set our net they know we are definitely over a school of fish.

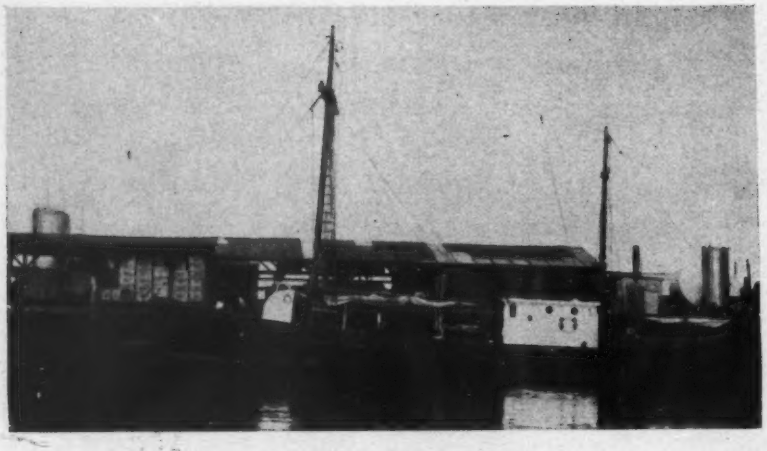
"Fathometer is indispensable from a safety standpoint, too. Fishing in Maine waters requires navigation through lots of dangerous underwater reefs and shallows — often in fog or darkness. It's comforting to know that we can depend on Fathometer to tell us the depth and give warning of shoaling bottom; that we can match these Fathometer soundings with our charts and use 'bottom navigation' to sail safely back to port."

Yes, Captain Martin, and many other captains fishing for herring, sardines and minhadin, depend on Fathometer to locate the fish schools and to protect vessel, cargo, and crew. No longer is it necessary for them to depend entirely on the "firing" of the water, whales, or other natural signs in order to find the fish. Now they use Fathometer to give a reliable report on fish and fathoms — to ensure bigger catches, easier catches, quicker trips, greater profits.

For further information write:

SUBMARINE SIGNAL COMPANY

160 STATE STREET DEPT. 9 A BOSTON 9, MASSACHUSETTS



The 80' x 17.6' x 9' "Hustler", owned by Eric Axelsson, Cape May, N. J., is powered by a 135 hp. Atlas Diesel engine, turning a 54 x 40 Columbian propeller to give a speed of 9 knots. She is equipped with Exide batteries, Columbian rope, and uses Gulf lubricating oil.

Maryland Oyster Season Has Been Profitable

WHILE there has not been an oversupply of shell stock oysters this season, there has been a sufficient supply to satisfy the packers' requirements, and the season has been one of the most profitable in the oyster industry. The high market and ideal weather are reported to be joint factors in this unprecedented condition. There is still a shortage of shuckers, although more are available than last year. Dredge boats have been able to get crews, and more boats are engaged than for several years.

The oysters in Tangier and Pocomoke Sounds are in good condition, as are all of the oysters in the lower Chesapeake Bay. The oysters in the northern end of the Bay are poor and scarce due to the unusually rainy season.

Oysters have been selling in the shell for from $2.50 to $4.00 a bushel. Shucked oysters have been selling at the following prices per gallon: standards, $5.00; selects, $5.50; and counts, $6.00.

Rockefeller Foundation to Survey Fisheries

A special survey of Chesapeake Bay fisheries will be made by the General Education Board of the Rockefeller Foundation in an effort to determine whether important species are disappearing from the Bay, and if this is true what can be done to restore them. The Board will also endeavor to form a basis of conservation on which Maryland and Virginia can agree.

LCTs May Be Used to Plant Shells

Edwin Warfield, Jr., Chairman of the Maryland Tidewater Fisheries Commission, recently announced that the Commission is contemplating the use of LCTs for planting oyster shells and for oyster transplanting operations in the Chesapeake Bay and in rivers during the coming Spring and Summer.

It is anticipated that the use of this type of craft instead of the present dredge boats would result in quite a saving, since with the LCTs some 10,000 or more bushels of shells could be washed overboard by hose in much less time than it now takes six men to plant 3,500.

New Rock Hall Ice Facilities

J. Walter Scoone, Rock Hall fish dealer, is preparing to erect an ice plant with a capacity of 25 tons daily. Ivens and Hudson, oyster packers, also are installing a 20 ton ice plant. Both of these plants are expected to be in operation in the near future.

Crab Prices

Frozen soft crabs have been selling in the Crisfield wholesale market at the following prices: medium, $1.75 per dozen; regular primes, $2.50; hotel primes, $2.75; small jumbos, $3.00; and large jumbos $3.50.

Dryden Bros. Open Seafood Plant

Lt. Col. Littleton T. Dryden, Capt. Charles R. Dryden and Sgt. James H. Dryden, who were recently discharged from the Army, have opened a seafood packing and processing plant in Crisfield. The firm will employ 18 oyster shuckers and 12 crab pickers, and will be known as Dryden Bros. Seafood Co.

Good Quality Oysters More Plentiful

Edwin Warfield, Jr., Chairman of the Commission of Tidewater Fisheries, states that no general mortality in oysters is apparent, and that fine quality oysters are more abundant this season than in 3 or 4 years, with production 25 per cent above that of last year.

New Jersey To Test New Oyster

THE rich oyster industry of Barnegat Bay may be revived with the appearance of a new healthy species of salt water oyster developed by State Biologist Dr. Thurlow C. Nelson of the Shell Fisheries Council. Once valued at two million dollars a year, the oyster take in upper Barnegat Bay has fallen off steadily since the Civil War, according to Dr. Nelson, due to lowered oxygen content of the water. The new variety will be tried out at Harvey Cedars.

Building Two Draggers for Connecticut

Delaware Bay Shipbuilding Co. of Leesburg, N. J. is building two 62' 6" draggers for the Connecticut fleet. One is for Capt. John Ponte of Stonington, to be powered with a 170 hp. Buda Diesel; the other is for Capt. George Berg of Mystic, to be equipped with a 135 hp. Caterpillar Diesel. Both boats are from designs of Ellery F. Thompson of New London, Conn.

Menhaden Vessel "Fire Island" Repowered

The 125' menhaden vessel *Fire Island* owned by J. Howard Smith Co., has been repowered with a 6-cylinder, 13 x 16 Atlas Diesel rated 400 hp. at 300 rpm., turning a 4-blade 68 x 50 Columbian propeller. A similar installation was made earlier this year in the Company's *Belford*.

Boston Dragger "St. Ann" Floated

THE 40' *St. Ann*, owned and skippered by Capt. Stephen Tarantino of Boston, which went aground off High Head on November 15 after her engine broke down 28 miles southeast of Thacher's Island in a gale, was floated by a Coast Guard cutter on November 17. Vincent Amato and Rosario DiGeorgio of Boston, members of the crew, were drowned, but Capt. Tarantino and three other crew members swam ashore.

Big Trips

Among several good trips landed recently at Boston were the following: *Estrela*, Capt. Morton Selig, 202,000 lbs., with a gross stock of $16,500 and gross share per man of $595; *Calm*, Capt. Iver Carlson, 191,500 lbs.; *Drift*, Capt. Eric Carlson, 280,000 lbs.

Bayou La Batre, Ala., Industry Active

RESIDENTS of Bayou La Batre, Ala., have been working overtime sending out hundreds of thousands of pounds of shrimp and fish to satisfy the Northern demand for seafood delicacies during the Christmas holiday season.

Two canneries are working at full capacity, but shippers of raw seafood products are reported doing the heaviest volume of business, one company alone having shipped 250,000 lbs. of shrimp and mullet the week of December 3. Christmas shipments from Bayou La Batre to the North are expected to run into millions of pounds.

Modern In Every Respect

THE 106 FT. STEEL TRAWLER "BAY"

The 106′ steel trawler "Bay", recently delivered to her owner, O'Hara Bros. Co. of Boston, is modern in every respect. Her design and construction incorporate all desirable trawler features, with compact arrangement that permits ample accessibility.

The construction of the "Bay" represents a continuance of ship-building skill and experience which have produced quality and strength in numerous commercial and Government craft over a long period of years.

Mathis is ready to co-operate with fishing vessel owners in meeting their requirements for building, converting and repairing.

JOHN H. MATHIS COMPANY

SHIPBUILDERS SINCE 1880

CAMDEN, NEW JERSEY

New England Office - - 88 Broad Street - - Boston, Massachusetts

Florida Mackerel Strike Settled by Compromise

A FOUR-DAY strike of 2,000 commercial fishermen operating between Fort Pierce and Key West ended on December 1 when a stalemate over the price for mackerel was broken. Wholesalers agreed to pay 12c a pound for the fish along the mainland and 10c a pound on the Florida Keys.

The Gulf Coast District Fishermen's Union had demanded 13c on the mainland and 12c on the keys, while the wholesalers had offered 10c and 8c. The compromise price was agreed upon at a session with Federal Conciliator Newcomb Barco.

Closed Season on Mullet Begins

The closed season on mullet fishing began December 8th in 38 Florida counties. Enforcement was expected to start December 1, but was postponed for a week while State Board of Conservation members awaited an opinion from Attorney General Tom Watson on their authority to do away with the closed season. Watson ruled that the Board lacked power to extend or change an open or closed season as fixed by the Legislature.

The closed season ends January 19. Year-round mullet fishing is permitted in 29 other counties through special legislative acts.

Spongers Concerned Over Withholding Tax

The Tarpon Springs sponge industry is concerned over a recent ruling of the Tampa Internal Revenue Office calling on sponge boat captains to pay withholding taxes for themselves and their crews, and also penalties covering operations over the past two years. Some 170 skippers are involved, and it is estimated that the back taxes and penalties aggregate more than $300,000.

It is maintained by the captains that when the withholding tax went into effect they were advised that they need not concern themselves about it. M. D. Biggs, secretary-treasurer of the Gulf Coast District Fishermen's Union, declared that enforcement of the ruling would wreck the sponge industry. He added that similar liability for payment of taxes may be enforced against commercial fishing boat captains, and in that event there would be disastrous effects upon the fishing industry of Florida.

Hearing Held on Intercoastal Canal

A hearing was held November 13 at Clearwater before Army Engineers on the question of the "missing link" of the projected intercoastal canal between the mouth of the Anclote River at St. Marks. Among the organizations represented at the hearing was the Gulf Coast District Fishermen's Union, which submitted briefs advocating the canal as a boon to the State's fishing industry.

Fishing Restrictions Lifted

The War Department recently announced that it will lift restrictions on fishing on the coastal area between Port St. Joe and Carrabelle. The area was used by the Army Air Forces as a bombing target during the war.

Forty-One Pound Sturgeon Caught

Glen Nash, operating a commercial fishing boat in the St. Petersburg area, recently caught a 41-pound sturgeon. The fish was caught in Boca Ciega Bay, and is reported to be the first sturgeon caught in those waters in 25 years.

Tarpon Springs Sponge Sales Show Increase

Sponge sales on the Tarpon Springs Sponge Exchange for the week of November 19 totalled $43,649.24. Sales for November through the nineteenth were $164,734.65, compared to November, 1944 sales of $97,416.75. Sales for 1945 through the nineteenth aggregated $2,457,572.48, while sales for 1944 to the same date were $2,341,355.36, and sales for 1943 were $2,030,154.44.

To Stop Illegal War-Time Practices

J. Tom Hurst, State Supervisor of Conservation, recently said that many illegal war-time practices of commercial fishermen must be discontinued. He stated that fishermen using illegal nets and mesh would have to change to legal mesh within 60 days, and added that seafood dealers handling such illegal products are subject to having their licenses revoked. Mr. Hurst said that if illegal practices in the crawfish industry are not curbed in the near future, it will be necessary for the Department to prohibit crawfishing for an indefinite period to bring about crop improvement.

The 52' x 17' x 5' shrimp trawler "Dandy", owned by Chas. Ludwig of Miami, Fla. She is powered by a 65 hp., D8800 Caterpillar Diesel with Twin Disc reduction gear and 38 x 30 Columbian propeller and has a speed of 9 mph. She uses Willard batteries, Plymouth rope, Linen Thread Co. nets and Pettit paint.

First Mackerel Landed

Two boats brought 14,000 lbs. of mackerel into Key West on November 13, the first catch of the season. The fish were netted off Loggerhead Key, 20 miles east of Key West.

Giant Shark Caught

The largest shark caught in Florida waters in recent years was brought in recently by Shark Industries, Fort Pierce. The shark weighed 3,400 lbs.

Texas Shrimpers Hampered By Adverse Weather

ALTHOUGH the Texas bay and inland water shrimp season which closed December 15 got off to a fairly good start in September, it slowed down considerably during October and November, and it is estimated that landings for the three-month period will show a big decrease from production during the same period of 1944. High winds and rough seas were reported responsible for the decline. The bay shrimp season will remain closed until March 1, but shrimping will continue in the Gulf during this period when weather permits.

More shrimp boats are operating in Texas waters now than during any previous period. These boats, as a general rule, are larger than boats operated in the past, and are better equipped. With more favorable weather, shrimp totals should show a marked increase, especially in the upper coast area.

Fishing Gear Damaged by Gale

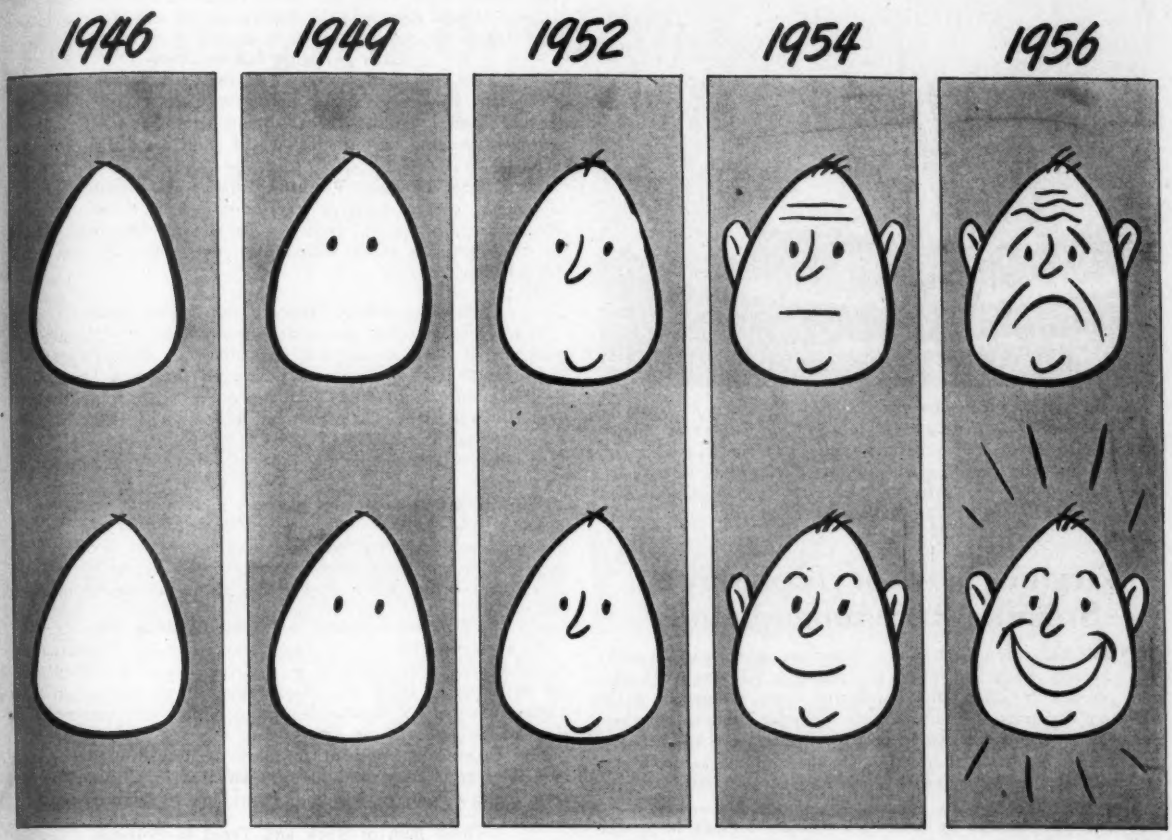
The worst norther of the season struck the upper Texas coast on November 21, and considerable damage to fishing gear was reported. The *Alberta*, skippered by Capt. Wm. D. Cascaden, was shrimping well offshore when the first wind struck and was unable to drop anchor; consequently, high seas soon flooded the boat and stopped the engine. The vessel drifted for three days until a deck hand made his way to shore some distance south of Corpus Christi Pass. A rescue craft was sent to bring the boat to port.

Aransas Seafood Co. Remodeled

The Aransas Sea Food Co., Aransas Pass, Texas, owned by Capt. P. A. Bradshaw, has been remodeled and is equipped to handle fish, shrimp and oysters. More than a dozen trawlers are operating from the Company's pier, some of which are owned by the Company.

Huge Sea Turtle Caught

A giant sea turtle, 6' long and 80" wide and estimated to weigh from 600 to 800 lbs., was pulled out of the intracoastal canal by West Columbia fishermen. The turtle was dragged from the canal by lines and a truck.



Two ways your face can grow in the next few years

USUALLY, our faces show what's happening to us. For instance, suppose financial matters are constantly on your mind.

Suppose you know that there's practically no cash reserve between you and trouble.

It would be surprising if your face didn't show it.

But suppose that, on the contrary, you've managed to get yourself on a pretty sound financial basis.

Suppose that you're putting aside part of everything you earn . . . that those dollars you save are busy earning *extra* dollars for you . . . that you have a nest egg and an emergency fund.

Naturally, your face will show *that*, too.

There's a simple and pretty accurate way to tell which way your face is going to go in the next few years:

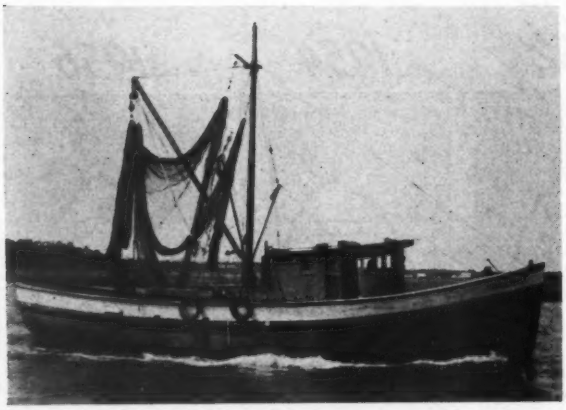
If you are buying, regularly, and holding as many U. S. Savings Bonds as you can, you needn't worry.

Your face will be among the ones that wear a smile.

Buy all the Bonds you can... keep all the Bonds you buy

ATLANTIC FISHERMAN

This is an official U. S. Treasury advertisement—prepared under auspices of Treasury Department and War Advertising Council



The 56′ x 16′ "Thunderbolt", owned by Earl J. Toomer, Thunderbolt, Ga., is equipped with a 115 hp. Caterpillar Diesel fitted with Twin Disc reduction gear and swings a 42 x 38 Columbian propeller to give a speed of 10 mph. The vessel uses Willard batteries, Fish Net & Twine Co. nets, Columbian rope and Bethlehem cable.

Virginia Advisory Committee Submits Recommendations

TWELVE recommendations, aimed at restoring Virginia's seafood resources, were submitted to Governor Darden recently by O. A. Bloxom, Battery Park, Chairman of the Advisory Committee of the Virginia Fisheries Laboratory. Construction of a new fisheries laboratory to carry on research and give a solid scientific foundation to the seafood industry was urged by the group as essential to long-range plans for promoting the industry.

A goal of planting at least one million bushels of oyster shells annually to rehabilitate depleted public rocks and to increase the State's seed beds was projected by the advisory group. The committee also recommended increased appropriations by the General Assembly for having the Laboratory intensify its efforts against the oyster drill, principal enemy of the oyster in the State.

Another recommendation urged that an exploratory study of current shad hatchery operations be made for the purpose of evaluating present methods and results, and also for suggesting specific proposals that may enable the State to improve propagation methods for shad as well as other species.

The group suggested that the amount and source of funds for operations of the Commission of Fisheries should be determined through the presentation of a detailed budgetary request to the Governor and General Assembly, and not arrived at on a basis of tax collections by the officials of the Commission, as is now the case.

The Committee advised that tax collections on the seafood industry be made by State and county agencies. Commission personnel thus would be relieved of tax collection responsibility, and could provide more time for law enforcement work.

The abolition of the present oyster bushel tax was recommended in favor of an oyster house tax.

Calling for a reallocation of district and police supervision in accordance with improved facilities for law enforcement, the group urged that all seafood police officials be appointed by the Commission of Fisheries. They further recommended that police officials be furnished with a uniform, a boat and an assistant. Violators of seafood laws would be given a summons to appear in the local county court for dispensation of their cases.

The committee recommended that an up-to-date compilation of Virginia seafood laws be made, and that a simplified summary of all seafood laws and regulations be made available to the public. The group also suggested that existing laws should be studied for the purpose of making constructive changes that may result in administrative improvement.

The establishment of a State Fishery Commission, with a membership of 7, including 4 practical seafood men representing the various branches of the fishing industry, was suggested. The other 3 would represent the State at large, and the commission would be authorized to select an executive director.

Crab Dredging Season Opens

The hard crab dredging season in the Chesapeake Bay opened December 1. Five Tangier dredgers, Capts. Ashby Crockett, James Thornes, Charles Pruitt, Holmer Pruitt, and Alfred Pruitt, are now working the grounds. Hard crabs are selling for $5.00 a barrel.

Oyster Dredgers Working Tangier and Pocomoke

Tangier oyster dredgers have returned from the Potomac oyster grounds, and will dredge in Tangier and Pocomoke Sounds for the remainder of the season. Tangier oysters are now selling for $3.00 per bushel.

Seaplane Patrol Proposed for Oyster Rocks

A seaplane patrol to checkmate the activities of night-dredging poachers in the Potomac and Rappahannock oyster waters was suggested at a recent conference between Governor Darden and a delegation of some 30 oyster planters from the Tidewater area. It was brought out that one plane could cover both the Potomac and Rappahannock areas easily, and Charles M. Lankford, State Commissioner of Fisheries, agreed to investigate the matter.

The Fisheries Commission will put extra patrol boats on the Potomac and Rappahannock Rivers in an effort to curb the mounting tide of thefts from leased oyster rocks. A bill will be submitted to the next General Assembly proposing increased rentals on State-owned beds to cover any additional expense incurred.

Commission Asked to Oppose Berthing Area

At a meeting of the Virginia Commission of Fisheries, held November 27 at Newport News, a group headed by Gary Menzel appeared to enlist the co-operation of the organization in a move to oppose a boat anchorage for "idle" Government cargo ships in the James River.

The Commission decided to allow continued crab dredging in Chincoteague Bay, and to open an area in Chesapeake Bay from Smith's Point to Windmill Point, for dredging oysters.

Good Run of Rock and Trout in Potomac

There was a good run of rock and large trout in the Potomac River during November.

Norfolk Area Landings

Landings in the Norfolk area for the month of November totalled 620,000 lbs., and showed a decrease of 182,000 lbs. from landings of the previous month, and a decrease of 172,000 lbs. from November, 1944 landings. Gray sea trout led the varieties with landings of 256,000 lbs., followed by croakers with 118,000 lbs. and scup with 54,000 lbs. Only 6,000 lbs. of the total came from pound nets, the remainder being landed by draggers.

William H. Hopkins Dies

William H. Hopkins, 81, founder of the Hopkins Fish and Oyster Co., Norfolk, Va., died recently. He had been active in the seafood industry for many years.

Hampton Market News Office to Open

A new Market News Office, in charge of Cyrus H. Chilton, was scheduled to be opened by the Fish & Wildlife Service at Hampton about December 17.

The office will report information on movements of fishery products from Norfolk, Hampton, Phoebus, Crisfield and other eastern shore points, and from Beaufort and Morehead City in North Carolina. Next Spring it is planned to include information on landings of menhaden.

Idle Anchorage Plans Forestalled

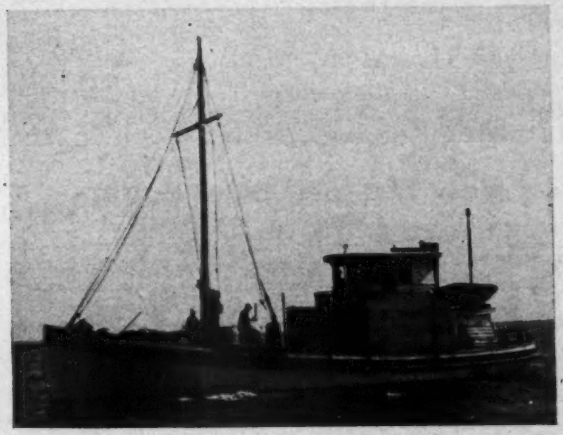
As a result of action by the Fish & Wildlife Service and other interested parties, the Navy has temporarily abandoned plans to utilize sites in the York River, Va. and the Patuxent River, Md. for anchorages. If the proposed anchorages had been established in the York River, it is estimated that 250,000 bushels of market oysters would have been directly endangered, and in all one million dollars worth of oysters might have faced closure.

The proposed anchorages in the Patuxent River would have included approximately 1,200 acres of oyster bottoms with an immediate value of one million dollars. Some of the most productive oyster bars in Maryland are located within the boundaries of the area.

Harvesting Fish Or Shellfish— WOLVERINES

Demonstrate Reliability And Economy of Up-Keep

The "Carlo and Vince" unloading mackerel at New Bedford, Mass. She is owned by Capt. Bennie Favazza of Gloucester, and equipped with a 150 hp. Wolverine Diesel.



The "Catherine M. Wedmore", operating between New Haven, Conn., and Greenport, L. I. She is owned by C. K. Wedmore, and is powered with a 120 hp. Wolverine Diesel.

There is a Wolverine Diesel for Every Fishing Power Requirement

Wolverine Motor Works Inc.
Union Ave. Bridgeport 2, Conn.

You'll Be FIRST WITH THE MOST When You Use PAULS'

• TRAP WEBBING • GILL NETTING • COTTON SEINES •

"Time and Tide Wait for No Man," as the commercial fisherman well knows. And that time is money — getting the catch into the market with the least possible trouble and delay — none will deny.

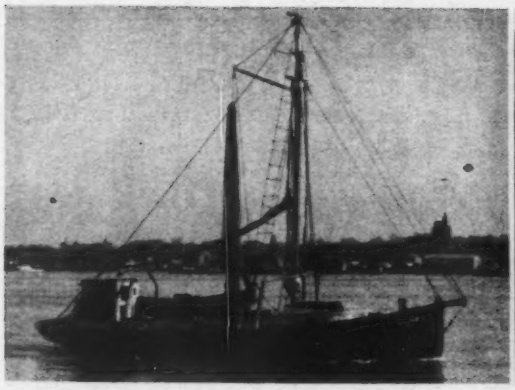
For over 40 years Pauls' fish nets have proved themselves the "stand-bys" of many of the most successful fishermen and fleet owners.

No matter what the catch, Pauls' nets made on the very latest type automatic equipment, of the finest cotton and linen twines, zealously inspected by master craftsmen, make it easy to be "first with the most."

The Pauls' dealer in your locality will welcome the opportunity of showing you Pauls' nets, because he knows that once you use them you're sold for life on them. See him today for the finest

TRAP WEBBING — GILL NETTING — COTTON SEINES

PAULS FISH NET COMPANY
MAIN OFFICE: 357 WEST OHIO STREET, CHICAGO, ILL.



The 37 ft. dragger "Clara T." and her owner, Capt. Robert Sanchez of New Bedford, Mass. The boat is powered by a Chrysler Royal engine with 3:1 reduction gear, sold through Walter H. Moreton Corp. She is equipped with a 32 x 20 Columbian propeller and Hathaway winch, uses Gulf fuel and lubricating oils, and has a speed of 9 mph.

New Bedford Fleet Suffers Heavy Storm Damage

NORTHEAST winds reaching 70 miles an hour accompanied by driving rain disabled two New Bedford fishing draggers the latter part of November, while several boats were forced to ride out the storm. The 73′ dragger *Emily H.*, owned by Superior Fish, Ltd., and skippered by Capt. Hiram Jackson, drifted helplessly for six days and five nights after her engine failed off Pollock Rip. She was found by the British Merchant Ship *Wanderer* 80 miles south of Block Island on December 3. The vessel, which has a draft of 11′, drifted successfully over 28 miles of the Nantucket Shoals, where water is normally only 4 or 5′ deep in many places.

The vessel's foremast is gone, the hatch covers must be replaced, gallows frames were blown off, the deck is splintered and part of it is gone, and most of the vessel's fishing gear was washed overboard or burned for flares. Deckhand Louis M. Larsen, 57, of New Bedford, was killed when 6′ of deck, which was torn away by the wind, struck him. Harold J. Smith, also of New Bedford, suffered a smashed collarbone when the deck tore away.

The *Nashawena*, owned by Capt. Daniel F. Mullins and skippered by Capt. Sheldon S. Kent of Fairhaven, which fought the gale off Block Island for three days after her rudder was broken, was towed into Newport, R. I. by a Coast Guard cutter on December 1.

The scallop dragger *Muriel & Russell*, skippered by Gunnar Peterson of New Bedford, arrived in port on December 2 after four days of fighting the seas off Pollock Rip. The vessel's dories were washed away, and her pilot house was half ripped off.

The storm caused five Provincetown draggers to break from their moorings, and one of them, the 52′ *Queen Mary*, owned by Anthony Russell, sank against the West End breakwater. The *Shirley & Roland*, owned by Ferdinand and Louis Salvador, the *El Mardo*, owned by Joseph Davis, and the *Annabel R.*, skippered by Anthony Costa, went ashore. The *Perry Brothers*, owned by Joseph and Domingo Perry, drifted up against the Town Wharf where she was boarded by her owners.

Several Chatham fishing boats were beached, and a fishing boat owned by Joseph B. Peters sank at the Town Landing.

"Florence & Lee" Lands Record Catch

Record landings of fish by a single boat at New Bedford were made on November 28, when the *Florence & Lee*, owned by Superior Fish, Ltd., and skippered by Andrew Decker, brought in 190,000 lbs. The vessel, which usually fishes out of Gloucester, was out 12 days and brought in 40,000 lbs. of large cod, 120,000 lbs. market cod, 18,000 lbs. of haddock and 12,000 lbs. of yellowtail.

Change Quahog Limit

Fairhaven Selectmen recently agreed to limit quahog catches to 30 bushels a boat, instead of 15 bushels to a man, following a hearing with fishermen. Decisions on regulation of quahogging by power dredges in Fairhaven waters were taken under advisement.

May Construct Lobster Hatcheries

Archibald K. Sloper, State Conservation Commissioner, recently announced that he will ask the Legislature to authorize construction of lobster hatcheries on Martha's Vineyard and at Buzzards Bay at a total cost of $30,000, as part of a program to prevent further depletion of Massachusetts' lobster stock.

Sloper said that pollution of streams is perhaps the Department's most pressing problem. Stream pollution, particularly in the Merrimac, Ipswich and Blackstone Rivers, has caused a loss of nearly $2,500,000 annually in fish and property destruction. He endorsed a bill now before Congress which would permit river-situated industries to clean up their pollution with the cost being deducted from Federal taxes.

Board of Trade Discusses Harbor Improvements

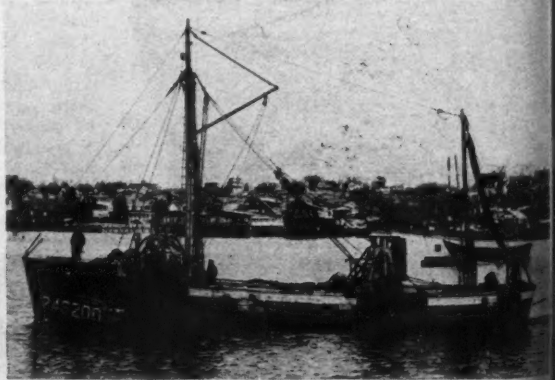
The Hyannis Board of Trade directed its standing Harbor Committee to work with the Hyannis Yacht Club, the Cape Cod Chamber of Commerce and other interested groups, and heard a report from General Richard K. Hale, director of the State Division of Waterways on the status of proposed harbor improvements on the Cape and the Islands, at its regular meeting held on December 4.

His report recommended modification of the existing project for Hyannis Harbor to provide for the following: a channel 12′ deep, with widths of 150′ and 100′ in the outer and inner harbors, respectively; an anchorage area 12′ deep and about five acres in area adjacent to the inner harbor channel north of Harbor Bluff; and a riprap jetty, 1,000′ long, extending south from Dunbar Point, at an estimated first cost of $125,000, with $1,600 annually for maintenance.

Provincetown Names Harbor Protection Committee

A Harbor Protection Committee was appointed at a meeting of the Provincetown Fishermen's Association held December 2. Members of the committee are Frank Flores, chairman; Capt. Manuel Zora; Antone Thomas; Ferdinand Salvador; John Russ and Arthur B. Silva.

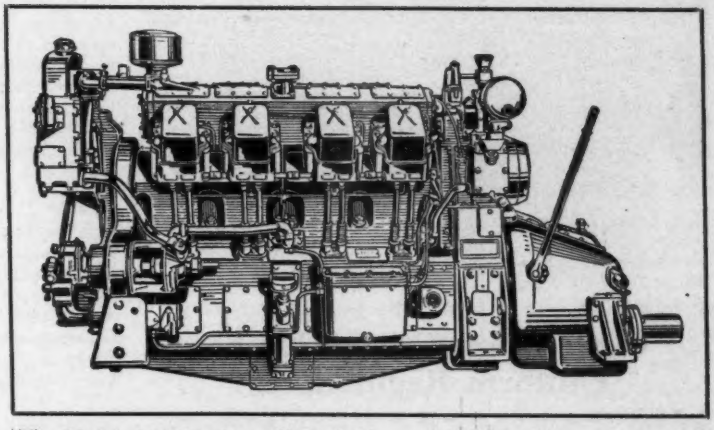
The Committee met on December 5 with members of the Board of Selectmen and members of the Board of Trade's Harbor Protection Committee to submit plans for harbor protection. The group has requested Herman A. McDonald, Commissioner of the Department of Public Works, for an immediate hearing on the plan, which calls for extending the Town Wharf 400′ out into the harbor with the cross of the "T" extending 300′ on either side.



The 73′ dragger "Cigar Joe" owned by Capt. Joseph Frontiera of Gloucester, Mass., and powered with a 170 hp. Buda Diesel

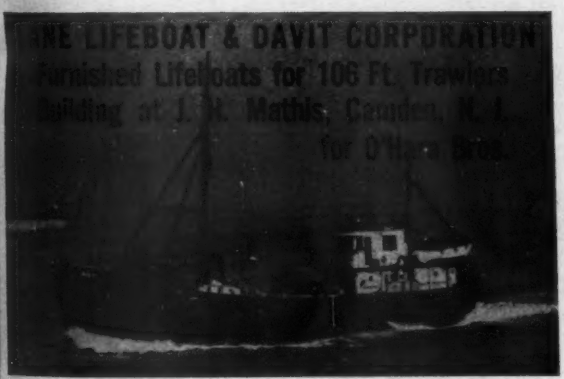
MAINE FISHERMEN!

Avoid expensive "tie-ups" by powering your boat with a Caterpillar Diesel. Besides the dependability you buy with your engine, you also have immediate access to Southworth's large service and parts department should you need quick repairs.



The Model D17,000 Caterpillar Diesel, rated 135 Continuous horsepower. Will swing 55" wheel. Ideal power for draggers, sardine carriers, lobster smacks.

SOUTHWORTH MACHINE COMPANY
30 Warren Avenue
PORTLAND, ME.
CATERPILLAR DIESEL MARINE



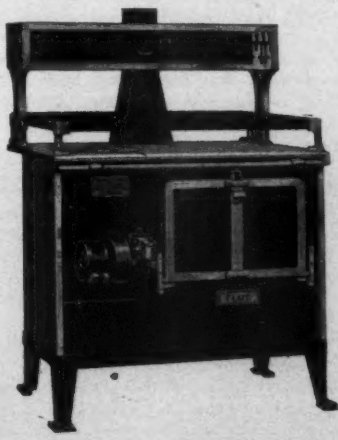
LANE LEADS THE WAY!
Specialists in Lifesaving Equipment for FISHING VESSELS

PRODUCTS BUILT BY LANE
BUILDERS & REPAIRERS

METALLIC & WOODEN OAR PROPELLED, & MOTOR LIFEBOATS
COMMERCIAL & SHIP'S WORK BOATS SURF BOATS
ELECTRIC & HAND BOAT WINCHES
MECHANICAL DAVITS
LIFEBOAT SKATES BOAT CHOCKS
ALUMINUM Lifeboats, Davits and Winches

LANE LIFEBOAT & DAVIT CORPORATION
FLUSHING RIVER AT 40th ROAD
FLushing 3-8100 Flushing, N. Y.

YOU'LL FIND
Webbperfection
OIL BURNING
STEEL GALLEY RANGES
on the new trawlers "Mary & Joan" and "Esther M."



Now, while profits justify, is the time to replace your worn out range with one of our new models, having a two piece polished top with cover and 9" feet to facilitate cleaning.

The burner uses the same oil as the Diesel engine, so you need never miss a tide waiting for coal to be delivered.

Made in sizes from 2½ to 9 ft. long.

WRITE FOR CATALOG F

ELISHA WEBB & SON CO.
136 S. FRONT ST. PHILADELPHIA 6, PA.

The "Paul Jensen", 42' x 12' tug built by her owner Paul Jensen of Muskegon, Mich. and his two sons. Powered by a Kahlenberg Diesel engine swinging a 34" propeller, the vessel has a speed of 9 mph. She uses Plymouth rope, and Linen Thread nets.

Great Lakes Official Urges Uniform Regulations

VIRTUAL depletion of some of the most valuable species of Great Lakes fish is foreseen soon by Dr. John Van Oosten, Area Coordinator of Fisheries, Ann Arbor, unless uniform fishing regulations are established among the Great Lakes States and Canada. He asserted that establishment of a treaty between the United States and Canada which would set up uniform regulations and insure enforcement appears to be the only way to assure that fish are not exhausted.

Dr. Van Oosten added that under the proposed treaty which is expected to be presented to Congress soon, Great Lakes States would have some restrictive control, but an International Commission would have final ruling and could alter restrictions whenever necessary to prevent depletion of fish.

"In the past," Van Oosten said, "fishing restrictions on the Great Lakes have tended to be those of the State with the lowest standard. The problem of enforcement always has been difficult. A fisherman from one State doesn't want to throw back a fish less than 12" long if he knows a fisherman from an adjoining State can keep the same fish if it's 9" or longer.

"Ciscoe, whitefish and lake trout are among important fish that have been or are undergoing serious depletion because of non-uniform and inadequate fishing regulations which permit overfishing. At one time the most valuable market fish in Lake Erie, ciscoe have been so reduced through intensive fishing that only about 25,000 lbs. a year are taken. Previous to 1925, approximately 18,000,000 lbs. were taken.

"In Lake Huron, the average yearly take of whitefish once was 1,500,000 lbs., and a high of 4,000,000 lbs. was reached in 1931 and 1932. Since then the catch has dropped steadily because of overfishing. In 1942, only 95,000 lbs. were taken, the lowest catch on record.

"Lake Superior is now being exploited because it is the only remaining Great Lake with areas that have never been fished commercially. Such fishing is lucrative from the fisherman's standpoint, but in time will have disastrous effects."

Smelt May Be Staging Comeback

Reports from commercial fishermen indicate that smelt may be staging a comeback in Michigan waters of the Great Lakes, the State Conservation Department reported. The Department said that one commercial fisherman shipped 1,500 lbs. of smelt one day during a recent week, and that other commercial fishermen had recently reported daily shipments of several hundred pounds of the fish. The smelt ranged from 5" to 10" in size.

Small Amount of Spawn Taken from Lake Trout

Only a small amount of spawn was taken from lake trout when the season opened in November, according to Fred A. Westerman, chief of the Fish Division of the Michigan Conservation Commission. The season opened November 1 on Lake Huron, November 5 on Lake Superior and November 11 on Lake Michigan. Westerman said that this season's production would probably equal that of 1944, when the take reached 5,800,000 lbs.

Fish Producers Oppose International Commission

At a meeting of the Michigan Fish Producers, Inc., at Traverse City, Mich., on November 8, a discussion was held on the proposed International Fish Commission for the United States and Canada, to be made up of three appointees from each country. The meeting went on record as opposing such an organization.

It was held that the Commission would be answerable to no one, and that the United States should have a larger representation. The group felt that the Commission would place regulations on commercial fishermen without giving them a voice in the matter. The organization also believes that there is a possibility that the duty may be removed from Canadian fish, and that Great Lakes fishermen will have to compete with Canadian fishermen.

The annual election of officers was held, and Willis J. Cross, Sr., of Charlevoix, was elected president; George LaBlanc, Jr., Charlevoix, secretary-treasurer; and Roy Buckler, Leland, State Counsellor.

Illegal Fish Nets Surrendered

Commercial fishermen have surrendered 330 miles, or 1,750,000' of illegal fish nets to Conservation Department officers since September 6, when a new law standardizing net sizes went into effect. The Department reported that surrendered webbing is destroyed, but that owners are permitted to salvage leads and floats. With two minor exceptions, all illegal nets used by fishermen operating in Michigan waters of the Great Lakes were surrendered voluntarily, the Department reported.

Wisconsin Farm Ponds Rearing Pike Fry

Additional farm ponds will be leased by the Wisconsin Fisheries Division in 1946 for the rearing of wall-eyed pike fingerlings, which comprise the most important part of the State's artificial fish stocking program. The movement away from hatchery rearing ponds to farm ponds is the result of unique and nearly accidental experiments by Department workers during the last several years.

A few years ago Warden Lawrence Hope of St. Croix planted some pike fry in a farm pond in St. Croix County. The fry had a higher survival ratio, and the pond grew more fingerling pike at a more rapid rate than the orthodox rearing methods which had been employed by the Fisheries Division in previous years.

The secret of Hope's success lay in the fact that a pond in rich agricultural soil is self-fertilizing, and there is an abundance of bug growth. Another factor is the shallowness of the ponds, which causes Winter frosts to kill all fish life annually, consequently, in the Spring new fry plantings are not endangered by larger fish surviving from the previous Summer's crop. Some 60 of the ponds, most of them in St. Croix and Polk Counties, were in operation last year.

Bayfield Herring Harvest Starts

The herring season, which got away to a good start the middle of November, was in full swing a week later, and crews at the four Bayfield fisheries were working at top speed to handle the catches brought in by fishermen.

The four fisheries are La Pointe Brothers, Otto L. Kuehn Co., Hadland Fisheries, and Booth Fisheries Corp.

Haertel with New Kewaunee Yard

Walter W. Haertel of Sturgeon Bay, Wis., who has been connected with the Kewaunee Shipbuilding & Engineering Corp., Kewaunee, Wis., in the capacity of Naval Architect and General Superintendent, has severed his connection with this concern and returned to the private practice of Naval Architecture. He also has associated himself with Robert Krauss, former hull superintendent in the same yard, in the formation of a new boat yard in Kewaunee under the name of Krauss Kraft Company.

The concern will specialize in the construction of welded steel commercial vessels up to approximately 80' in length, and has work underway on a 52' fishing boat for Joseph Cayner, Jr. of Port Washington, Wis., to be powered with a Model 8-DCMR-1125 Buda Diesel.

Mr. Haertel has developed a 28' V-bottom steel model, which is being produced as a stock boat, adaptable for commercial use.

Harbor Surveys Asked

Congressman Alvin E. O'Konski of Wisconsin has introduced resolutions in the House of Representatives which call for a preliminary examination and survey of harbor facilities at Herbster and Saxon, Wis. Establishment of a harbor at Herbster would enable the fishing industry to continue through the Winter months, while a harbor at Saxon would provide a haven for fishing craft.

DANFORTH HOLDS IN HALF GALE

At 50 Fathoms..Scope 4:1

Captain Arne Pederson of the "Pelican", new 79-ft., 48-ton Gloucester dragger owned by Capt. Pederson and Carl Beckman of New Bedford.

More and more reports come in from fishermen who rely on the Danforth—nicknamed the "Devil's Claw" by Gloucestermen because it grabs bottom and stays put. Captain Arne Pederson of New Bedford writes regarding his 75-lb. Danforth: • "While fishing 80 miles off the Jersey Coast we found it necessary to anchor on the grounds for six hours. There was half a gale with a 40-mile wind, but our Danforth worked fine and we stayed right in place. The water was 50 fathoms deep, and we had 225 fathoms of ¾" wire in the water holding the anchor. We used the towing wire from the winch, handling it through a block on the gallows frame, and hauling it to the bow with a 3" rope bow line through the hawse pipe. • The Danforth is easy to handle; one man can throw it all around. You can get it overboard and get it in faster than a regular anchor, and you don't need any tackles to handle it.". . . *Danforth Anchors are available in all sizes. Order from stock . . . your dealer can supply you now.*

Danforth Anchors protected by U. S. and Foreign Patents.

For NEW Folder, write

R.S. DANFORTH • 2137 Allston Way • Berkeley 4, Calif.

DANFORTH

LUCKY STAR STEEL TRAWLER FOR VICKERS & NAKASH • BOSTON

DESIGNED and built in our Sturgeon Bay yard, LUCKY STAR is the first in a series of new type trawlers now under construction. She boasts numerous features not usually found in fishing boats of this size. Utilizing the famous Maierform hull and powered with 400 HP diesel, LUCKY STAR will be safe, dry and able to perform under the most adverse weather conditions. Simplicity of arrangement, plus auxiliary equipment replete with automatic instruments and controls, makes her easy to handle and permits the operators to fish rather than spend unnecessary time running the boat. Construction is modern in every respect, with due consideration given to strengthening portions of the ship that are subject to the greatest abuse. Crew accommodations 14. Fuel capacity 6500 gallons, fresh water 2000 gallons. Fish capacity 150,000 lbs.

L.B.P. . . . . 82'8½
Beam . . . . . 21'9
Depth . . . . . 10'9
Draft . . . . . 9'3

STURGEON BAY SHIPBUILDING & DRY DOCK COMPANY • STURGEON BAY • WISCONSIN

BOSTON OFFICE: STURGEON BAY [illegible] SALES, INC. — 148 STATE STREET, BOSTON 9 • PHONE: CAPITOL 3989

The 65′ x 18′ x 6′ shrimp trawler "Minnie & Clara", owned by G. L. Palmer, New Orleans, is powered by a D13000 Caterpillar Diesel engine.

Louisiana Fleet to Have Several Additions

SEVERAL new vessels for the Louisiana fishing fleet, including two steel boats, are either under construction or have been launched at various yards. The Klonaris Shipyard, Morgan City, launched four new 65′ x 18.6′ x 7.6′ boats recently. They were the *Nolan R.*, owned by Raymond LeLoupe, Morgan City; the *Captain Hurst* and another vessel not yet named, owned by Bertoul Cheramie, Berwick; and the *Faith*, owned by Sasa Fodale of the Universal Shrimp Co., Berwick.

Four boats, each 65′ in length, are under construction at the yard. One is owned by Mr. Fodale, two by Versaggi Shrimp Co., Patterson, and one by Chris Hansen, Morgan City.

The Prawn Producing Co., Morgan City, has added two new steel boats to its fleet, making a total of three steel boats owned by the Company, the first being the *Reckless*, which was launched last Summer. The two new vessels are named the *Careless* and the *Heedless*.

John Santos, owner of the Patterson Shipyard, Patterson, added the sixteenth trawler to his fleet recently with the launching of the 68′ *George Reyer* at his yard,

"Wawa" Being Repaired

The *Wawa*, which sank in the Atchafalaya River on November 29 as the result of a collision with a barge, is being repaired at the Terrebonne Shipyard. She is owned and skippered by W. F. Scott of Morgan City.

Three Boats Move to Florida

The *Lady Eunice, Mellena II* and the *Frances Elizabeth* of the W. L. Hardee fleet, Morgan City, left during November for New Smyrna, Fla. Mr. Hardee plans to operate out of that port in the future.

Capt. E. L. Peterson also left for New Smyrna during November with his boat *Playmate*.

Several Waterways Being Considered for Improvement

Plans for proposed improvements of parish waterways were outlined by a representative of the District Engineer's Office at a meeting called jointly by the Police Jury and the Houma-Terrebonne Chamber of Commerce November 16th. Listed for dredging and general improvements are Bayous Terrebonne, Grand Caillou, Little Caillou and Dularge. Bayou Dularge at present has practically no channel, and is of little use to fishermen.

Two Lake Charles Boats Make Good Catches

Two boats owned by J. R. Steeds & Sons Co. of Lake Charles had catches of 65 and 75 bbls. each recently, after only two days' fishing off Cameron.

Frozen Shrimp Stocks Increase

Over 4,000,000 lbs. of shrimp have been frozen and held in reserve in Louisiana and Mississippi this year. Last year at this time the amount of frozen shrimp on hand totalled 2,777,000 lbs. In addition, 3,842,000 lbs. of other frozen fish are reported in storage in the two States. Freezing of fish is estimated to have added one-third to the income of the fishing industry.

North Carolina Menhaden Season Off to Good Start

A SUCCESSFUL season is predicted for North Carolina menhaden fishermen, it was revealed recently by authorities who have studied the indications of a favorable run. Approximately 40 boats owned by Beaufort and Morehead City companies were reported to have made such good catches November 20th that the factories were unable to handle all of them.

It is reported that waters north of Hatteras are teeming with the fish, and in due time they will be running in waters plied by Morehead City and Beaufort boats.

Southport Landings Near Record

Shrimp landings at Southport on November 26 and 27 were near record production. For each of the two days the smaller boats averaged about 30 bushels of shrimp, plus fish. Approximately a dozen of the larger boats averaged 50 bushels per day. The *Mary Clark*, Capt. Clarence Simmons, top boat, averaged 87 bushels.

Approximately 20 shrimp trawlers came in from Beaufort, Hatteras and other points along the upper coast the week of December 30 to work out of Southport. Added to these new arrivals are about 15 boats owned by Wiley and Charles Wells which have been fishing at Rockville, S. C. this Summer and Fall.

According to records of the North Carolina Division of Commercial Fisheries, 5,115,500 lbs. of shrimp were landed in the State this year during the period from July 1 to November 30, while in the corresponding period last year only 2,206,950 lbs. were landed.

By working at a distance offshore the larger boats have revealed a new shrimping area, and their production has continued through all but the roughest of weather. Shrimp dealers believe that another year will see double the present number of larger trawlers operating at Southport.

Airborne Seafood Transportation Co. Formed

The Airborne Seafood Transportation Co. has been organized in Carteret County by 13 men formerly stationed at Cherry Point, and fresh seafood will be flown to northern markets from the County Airport.

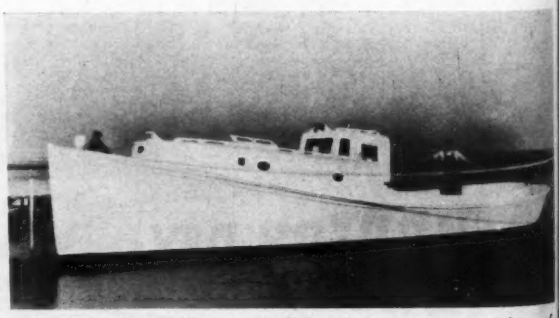
Southport to Have New Fish Houses

The city of Southport has leased a site on the waterfront to Dr. L. C. Fergus and R. C. Fergus, pioneer in the fish market business in Wilmington, who are reported to be planning the construction of a modern shrimp and fish house. At present the property is occupied by the fish house of Wiley and Charles Wells. Oliver Davis and Brother of Beaufort also are said to be planning construction of a new shrimp house at Southport.

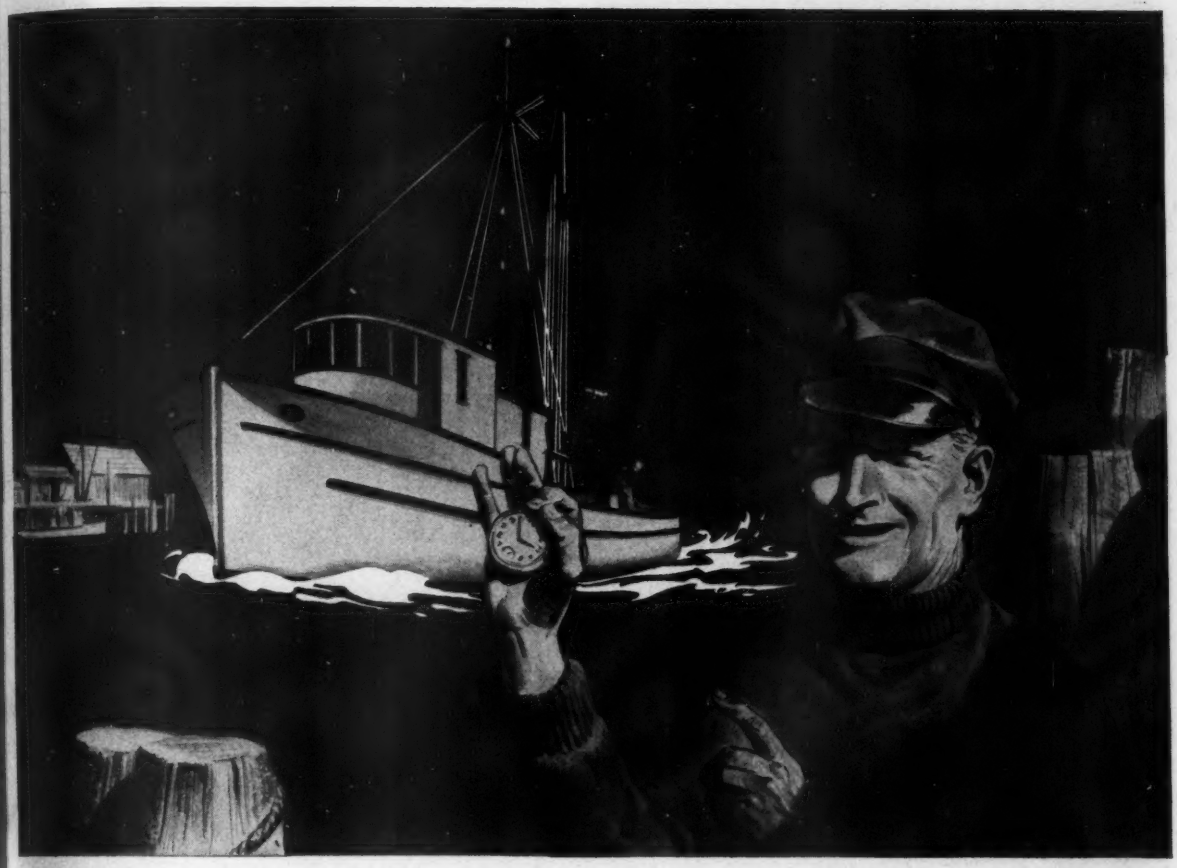
A. E. Downing of Pittsburgh, Pa. and C. H. Swan of Southport have bought a lot with 96′ frontage. By the first of February they plan to have a dock, a 30′ x 60′ fish house and marine railway under construction.

To Construct Ice Plant at Manns Harbor

W. Stanford White and Melvin White of Manns Harbor, and Dr. Steenie C. Chaplin of Columbia, plan to construct a $25,000 ice plant at Manns Harbor to cater to the fishing trade at Mashoes, East Lake, Manns Harbor and Stumpy Point.



The "Fannie Quidley", owned by Mrs. Fannie A. Nelson of Gloucester, N. C. and skippered by her son, Capt. Edward S. Nelson, aft. The vessel is equipped with Willard batteries, Columbian rope, Fish Net & Twine Co. nets, Hyde propeller.



You can set your watch by her!

Out to the nets and pots—making the rounds to the catch—skippers of sturdy fishing boats know the goodness of Chrysler Marine Engines.

In ports on the east and west coast, and on the Great Lakes, there has developed a real respect for Chrysler powered craft. It's built on dependable—reliable—safe performance—with clock-like regularity over any course.

Commercial fishermen everywhere appreciate those qualities in an engine that *makes* schedules. No wonder Chrysler Marine Engines are winning such hearty acclaim.

For they are "Built to Live in the Water!" They're not assembled or converted engines—not rebuilt or rebored jobs—but completely built in the great Chrysler Plants.

Let the nearest Chrysler Marine Engine Dealer tell you the whole story and check on your power requirements. In the meantime, why not send in the coupon below?

Chrysler
MARINE ENGINES
"BUILT TO LIVE IN THE WATER"

MARINE ENGINE DIVISION
CHRYSLER CORPORATION

12205 E. Jefferson, Detroit 31, Michigan
ACE • CROWN • ROYAL • DIESEL
80 to 141 Maximum Brake Horsepower

MARINE POWER TO FIT THE HULL

Two Sixes, an Eight, a Diesel — to fit your boat and your requirements! Proved and improved on the "sea lanes" in peace and war.

"LISTEN TO THE MUSIC OF ANDRE KOSTELANETZ, THURSDAYS CBS, 9 P.M. EWT"

MARINE ENGINE DIVISION, CHRYSLER CORP.
12205 E. Jefferson, Detroit 31, Michigan

Please send the Chrysler Marine Engine Catalog

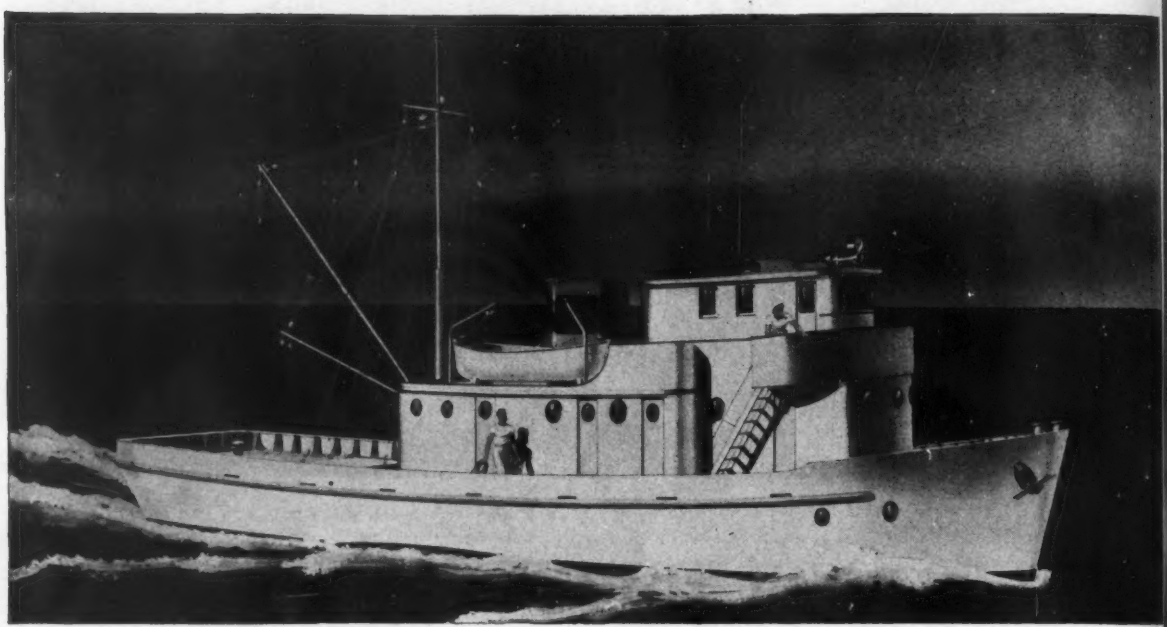
Name _____

Address _____

City _____ State _____

Higgins INDUSTRIES REG. U.S. PAT. OFF. INC. NEW ORLEANS commercial craft are

ENGINEERED FOR THE JOB



It was Higgins' long experience in building special purpose craft, thoroughly engineered to do the tough jobs—and do them well—that made it possible to build special-purpose boats for the greatest marine job in history—the winning and supplying of the beachheads in World War II.

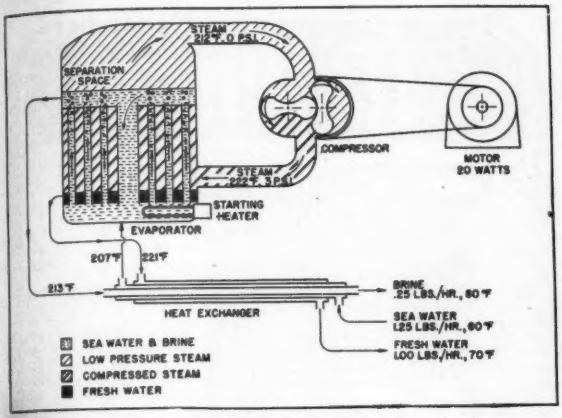
Now, we are again able to accept orders for the commercial craft that have made the Higgins name synonymous with dependability and low operating cost wherever men make their living from the sea.

Write us today, let us know your requirements, and we'll be glad to recommend whichever of our many stock models will fill them or, if necessary, suggest special construction. No obligation, of course.

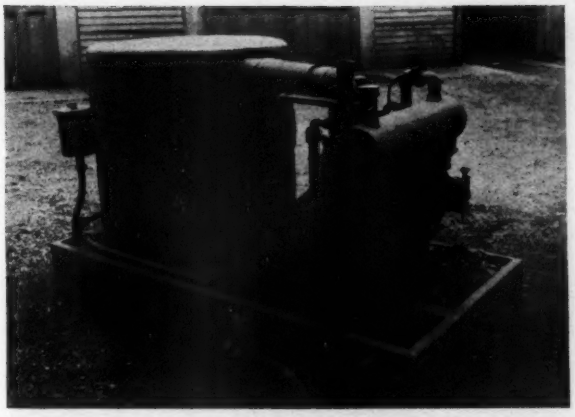
WORLD'S FINEST BOATS BY THE WORLD'S LARGEST BUILDER

"NAVIGATION WRINKLES FOR MOTOR BOATS"
Send for this book—130 pages, illustrated. Based on lectures given in Higgins Boat Operators and Marine Engine Maintenance School. Postpaid, $1.

Higgins INDUSTRIES REG. U.S. PAT. OFF. INC. NEW ORLEANS



A diagrammatic representation of compression distillation as applied to the distillation of sea water.



A recent development model of the Kleinschmidt compression distillation unit.

Apparatus for Distilling Sea Water Aboard Ship

A SUBJECT of interest to the marine field, from which the veil of secrecy has just been lifted, is the Kleinschmidt compression distillation unit. It is a mechanism with which fresh water is distilled from sea water by means of compression producing 175 lbs. of water for every pound of fuel consumed.

Practical application of the principle of compression distillation was attempted several times from 1856 until after World War I. At that time a few commercial installations were made by European firms. No American industrial application is known of.

Shortly before World War II, under the direction of Dr. R. V. Kleinschmidt (now Commodore, USNR), the laboratories of Arthur D. Little, Inc., Cambridge, Mass. undertook intensive development of compression distillation as applied to the production of distilled water from sea water. The result of their efforts proved so encouraging that even before Pearl Harbor units were under development for the Armed Forces. There is now enough equipment in service to produce distilled water for the daily needs of over a million men.

In a paper, recently presented to the American Society of Mechanical Engineers by Allen Lotham, Jr. for Arthur D. Little, Inc., the principle of operation was explained in full. Fundamentally it is this. Sea water passes into a chamber where it is heated to a point of evaporation. From there the steam goes through a compressor which puts it under a pressure of 3 P. S. I. increasing the temperature 10° F. Passing on into the condensation chamber, which is inside the evaporator, the heat of the steam is there utilized to heat the incoming sea water. As the steam condenses the fresh water passes out through a multiple jacket where it as well as hot brine from the evaporator aid in heating the incoming sea water.

One of these units would be extremely practical on a fishing boat. Its application would eliminate the need of storage tanks, providing room for additional cargo or necessary equipment.

With a compression distillation unit of 1000 gallons-per-day capacity, the production of one pound of distilled water requires about 20 watt-hours of 68 BTU's energy input. A conventional single-effect evaporator requires about 300 watt-hours or 1020 BTU's per pound of distilled water. The connections, heat transfer apparatus and controls are quite simple. Ordinarily, control of the operation is made solely through adjustment of the flow of feed.

Diesel Engine Design and Operation

(Continued from page 26B)

produced by the propeller. When used on small engines, the flywheel is generally cast solid and keyed to the crank-shaft, but on larger engines it is made in two halves and bolted to the shaft.

Coming now to the fuel supply system, the heart of any Diesel engine, it comprises the fuel pump, its distributing apparatus and the injection valves. The fuel pump has connected with it the governor and the metering and distributing device. Fuel oil is forced by the fuel pump through piping to the fuel injector. The fuel charge, preheated and gasified for combustion, is injected into the combustion chamber, flowing down a passage at the side of the injector into the injection cup and forced into the cylinder by a cam-operated plunger enclosed in the housing. A check valve in the injector curtails seepage of excess oil and prevents overloading the cylinder. The fuel pump delivers fuel oil to all the cylinders of the engine in the manner just described for the single cylinder.

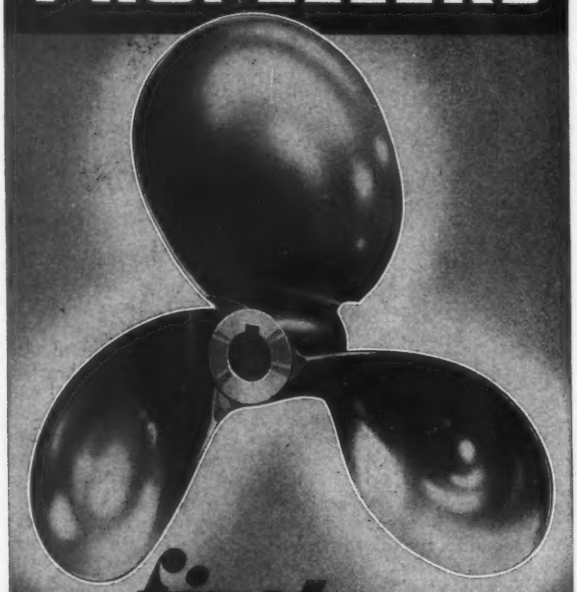
A more intimate idea of an injection valve may be obtained from the sectional view, Fig. 8. Fuel entering the valve through the fuel inlet is cleaned of sediment by passing through the filter, and then reaches the valve tip through a drilled passage. The flow of the fuel oil to the tip is controlled by the needle valve so that when the pressure at the tip reaches a predetermined value, the needle is lifted off its seat against heavy spring pressure on the valve plunger and fuel is forced by the oil pressure pump through the passage in the tip and into the cylinder through multiple orifices that produce a fine mist or spray. The turbulance and penetration thus secured effects an intimate mixture of fuel and air and thus assures complete combustion. The air inlet and exhaust valves are similar in construction and consist essentially of a hollow cylindrical body and a valve for closing its lower end. When the measured quantity of fuel has been delivered, the needle valve reseats itself, thus cutting off any additional flow of fuel to the cylinder.

Compressed Air

An air pump or compressor is an indispensable part of medium and large size Diesel engines for starting them, though small Diesels may be started by hand if provided with a fairly heavy flywheel, but every Diesel engine requires compressed air to burn the fuel oil, to properly spray the fuel into the cylinder, and in two-cycle engines to blow the spent gases out of the cylinder at the end of the power stroke as well as to provide working air for compression in the cylinder. Injection air for the spraying and combustion processes must be of high pressure, 600 to 1,200 p.s.i., and in order to keep its temperature down the compression in the air pump is done in two or three stages rather than one. This not only simplifies the cooling process but enables a given quantity of air to be compressed with much less power.

A two-stage, water-cooled air compressor having a discharge pressure of 1,000 pounds may be driven by the engine or independently by an electric motor of about 20 hp. The piston is made in two different diameters, the one for the low pressure stage and the other for the higher pressure. As compressed air for starting a Diesel engine is usually around 250 pounds pressure, it is generally obtained through a reducing valve from the high-pressure air stored in an air-tank, though a singlestage compressor may be employed. In any case there are two storage air tanks or "bottles", one for the high pressure air and the other for the low pressure air. The high-pressure tank is of one-piece steel construction while the low-pressure tank is generally formed of sheet steel and riveted. They are made in several sizes but average around 30″ in diameter by 96″ high.

MICHIGAN
MACHINED-PITCH
PROPELLERS



first
IN PERFORMANCE
first
IN DURABILITY

. . . . and consequently first with discriminating buyers the country over. Incomparably smooth because they are inherently balanced—the result of our exclusive and unerringly accurate Machined-Pitch process of manufacture. Tougher, more resistant to corrosion, because they are made of MICHALLOY, our own unique alloy which is far more durable than ordinary bronze.

If you would like the complete facts as to why you can expect better performance and longer service from MICHIGAN PROPELLERS, write for your free copy of our new catalog.

EXPERT RECONDITIONING
of propellers of all makes is available at one of our MACHINED-PITCH factory service stations near you. Write for address.

MICHIGAN WHEEL COMPANY
Grand Rapids 3, Michigan

Boston Landings for November

(Hailing fares. Figure after name indicates number of trips.)

Acme (1)	21,500	Mary and Jennie (1)	9,000
Adventure (3)	276,000	M. C. Ballard (2)	251,300
Annie (4)	40,000	Neptune (2)	109,500
Annie & Josie (4)	48,500	Newton (2)	200,000
Arlington (2)	252,500	Nina B. (1)	150,500
Atlantic (2)	247,000	Ocean (2)	376,000
Ave Maria (1)	7,000	Ohio (2)	232,200
Belmont (2)	381,000	Plymouth (3)	318,000
Billow (2)	330,000	Princess (3)	34,000
Boston (2)	54,800	Quincy (2)	130,000
Breaker (3)	220,500	Robert & Edwin (1)	9,500
Breeze (2)	300,000	Roma (3)	37,500
Brookline (3)	307,500	Rosalie D. Morse (2)	199,000
Calista D. Morrill (1)	600	Rosemarie M. (3)	275,000
Calm (2)	551,500	Rose Mary (1)	3,600
Charles M. Fauci, Jr. (2)	291,500	Rosie (3)	18,500
Crest (2)	521,000	Sea (2)	262,000
Delaware (2)	478,000	Texas (2)	75,000
Drift (2)	425,000	Theresa R. (3)	156,000
Estrela (2)	306,700	Thomas D. (2)	80,700
Fabia (2)	280,000	Thomas Whalen (2)	251,000
Gale (2)	405,000	Tide (2)	517,000
Hazel B. (1)	69,000	Triton (1)	135,000
J. B. Junior II (2)	15,100	Vandal (2)	64,500
Lark (2)	487,000	Venture II (1)	127,000
Leonarda (1)	16,200	Wave (1)	230,000
Maine (2)	344,000	Weymouth (2)	189,500
Maria del Soccorsa (4)	36,200	Wm. J. O'Brien (3)	616,000
Maristella (2)	94,500	Winchester (2)	479,000
Marjorie Parker (2)	77,500	Winthrop (3)	277,100
Marsala (3)	55,900		

Fisheries Institute Convention

THE first convention of the National Fisheries Institute, Inc. will be held in Chicago on Thursday, Friday and Saturday, April 25-27, 1946, in the Continental Hotel. E. M. Concannon of Walker's Fulton Fish Co., Chicago, has been appointed general convention chairman. A number of committees which will participate in convention plans will be named shortly.

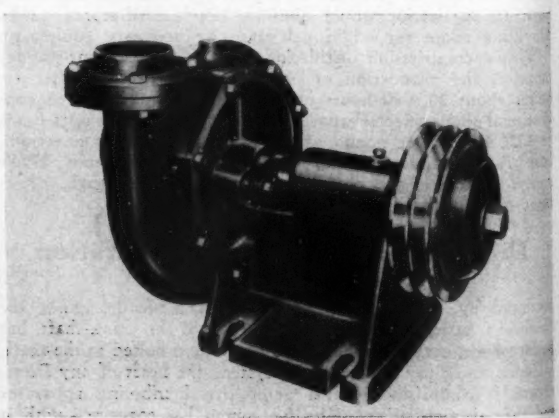
New Marine Products Reversible Pumps

MARINE Products Co., Detroit, Mich. is offering a contemporary line of reversible pumps to their small, high capacity, marine and industrial models. They are capable of operating in either direction of rotation, simplifying installation. The Model 5100 has a capacity of 50 gpm., Model 3100—150 gpm. and Model 4100—250 gpm.

Another new development is the Model R-400 which is claimed to be a Triple Purpose Pump with greater capacity, higher heads and operates at lower speeds. This unit operating at 1750 rpm. pump speed will give a maximum of 335 gpm., and under certain conditions heads up to 80′ may be obtained.

They also offer another model in the low price field with a maximum capacity of 50 gpm. at a 50′ head. This unit is supplied in cast iron or bronze. Still another model is the Combination Pump and Clutch arrangement which meets certain operating conditions where power conservation is required. This product may be set on or off by shifting a small clutch.

The company states they will offer the trade several new products the early part of next year, and have intimated that a streamlined automatic, electric bilge pump will be coming along soon. A self-priming centrifugal for both belt drive and portable engine also will be introduced.



Model R-400 Triple Purpose Pump.

SHIPMATE

MODEL 211

MARINE GALLEY RANGE

Specially designed for vessels having limited galley space. Serves up to 4 persons. A sturdy cast-iron range, coal or wood-burning. Top has one 8-inch hole and sectional cover and one 6-inch hole with solid cover over oven. Equipped with removable rails with adjustable rolling bar with locking handle. Over-all measurements 18½ x 21½ x 14; size of top 21½ x 13¾, oven 9 x 9 x 7. Weight only 93 lbs.
Write for Catalog #44

The STAMFORD FOUNDRY Co.

15 CANAL STREET STAMFORD, CONN.

Maintenance of Lubricating Oil

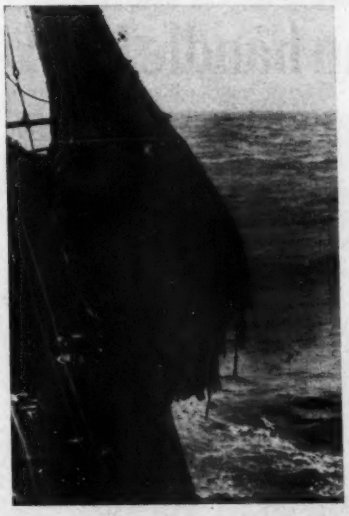
(Continued from page 26)

ing material, the reverse is true. Loose filtering clays are subject to migration, channeling, cleavage and difficulty in attaining beds of uniform porosity. When molded into a solid but porous block all of these handling difficulties become problems of manufacture and not of usage. With rigid process controls applied to the production line, Fullers Earth or other adsorbent clay blocks can be produced having no material free to migrate and with very closely controlled porosity. With the use of such blocks, adsorptive filtration can be easily and successfully applied to continuous lubrication maintenance.

With the proper proportioning of absorptive and adsorptive filtration to the lubricating system the elimination of both the physical and chemical contamination to much closer limits than those given, can be made an accomplished fact. The elimination of water and fuel dilution then becomes an operating problem and not a maintenance problem. In internal combustion engines, since they are "heat engines", the hotter the operating temperatures (within practical limits) the more efficient becomes the engine. With the problem of stuck rings, lacquered pistons, corroded bearings, etc., removed by adsorptive filtering oil maintenance, operating temperatures can be raised until the danger of blow-by water condensation in the crankcase is entirely removed. This same statement applies to fuel dilution except in the case of that fuel dilution which occurs during cold starts. Even under these circumstances the hotter operating engine readily evaporates this dilution from the oil when stabilized temperatures are attained, and fuel dilution never reaches the maximum allowed.

Continuous oil maintenance equipment, given the proper thought on design, on application, and on desired qualifications can reflect almost unbelievable results in maintaining machine efficiency, increasing machine life, and reducing machine maintenance.

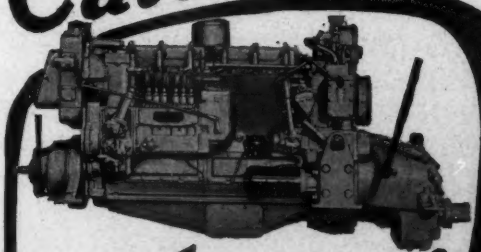
FISHING EQUIPMENT
for all sizes of
Draggers and Trawlers



Grimsby Fittings and Cod Ends
•
Roebling Wire Ropes
•
Wall and Plymouth Ropes and Twines
•
Danforth Anchors
•
Westerbeke Trawl Nets and Sections
•
Complete Line Marine Hardware

WESTERBEKE FISHING GEAR CO.
279 Northern Ave., Boston, Mass.
Branch Store and Warehouse at Gloucester

"Caterpillar"



MARINE DIESEL ENGINES
PROPULSION - AUXILIARY
STATIONARY POWER UNITS
ELECTRIC GENERATING PLANTS

H.O. PENN MACHINERY CO.
INCORPORATED
140th STREET & EAST RIVER, NEW YORK 54, N. Y.
BRANCHES
MINEOLA, LONG ISLAND. POUGHKEEPSIE, N. Y.
NEWINGTON, CONNECTICUT.

Large or small... we can handle 'em!

IT TAKES a lot of equipment to do a good job on boats. For example, part of our facilities includes 400 feet of docking capacity with a 50 ton derrick. Naturally, not all of our equipment is in continuous use; but when you need it, you need it bad! That's why we have picked the right men, and the right machines to handle *any* job in wood or steel (up to 200 feet) and to handle it *fast*.

FRANK L. SAMPLE, JR., Inc.

Shipbuilders

BOOTHBAY HARBOR, MAINE

Complete Modern Facilities for Designing, Building, Storing and Reconditioning Yachts and Commercial Vessels up to 200 feet.

★

Members of: Maine Boatbuilders & Repairers Assn., and Atlantic Coast Boat Builders & Repairers Assn., Inc.

Long Island Rejects Amendment To Trawling Ordinance

HEEDING the protests of some 40 baymen who charged that their livelihood would be seriously threatened, the Islip Town Board rejected a proposed amendment to the trawling and eel dredging ordinance at a public hearing held November 13. The amendment would have changed the ordinance to read as follows: "No person shall at any time engage in eel dredging or trawling by use of nets with the aid of beam or other trawls or other devices commonly used to take fish over that land under water owned by the Town of Islip."

Opposition of the baymen centered about the phrase "or other devices", which fishermen claimed could be interpreted to mean everything from nets to hooks.

Oysters Shipped by Air

What is believed to be the largest oyster shipment ever handled by the Air Express Division of Railway Express Agency passed through its La Guardia Field office in New York recently when 4,500 lbs. of the seafood, crated in over 500 tins, each weighing 80 pounds, were flown to Chicago in a chartered "reefer" plane.

Skipper Burned in Explosion on "Ruth R."

Henry Bradford of Montauk, skipper of the 43′ *Ruth R.*, owned by Daniel Parsons, was painfully burned recently when the engine on the vessel exploded. The vessel's cabin was burned and the roof was blown off the pilot house, but the hull and deck were not damaged.

General Seafoods Shows Film on Operations

The complete story of fishing, oystering, and shrimping operations of General Seafoods Corp. was told in motion pictures at a recent management meeting of General Foods Corp., New York. J. Lawrence Alphen, president of General Seafoods, and members of his staff, augmented the film by reviewing the history of the unit and outlining plans and expectations for the future.

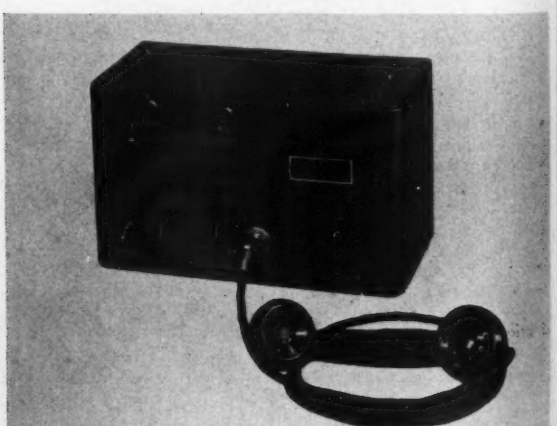
Pictures were taken at the Greenport, L. I., plant of the Bluepoints Company, Inc., oyster operation of General Seafoods; at the Boston Fish Pier; and at shrimp plants located in Louisiana.

Radiation Products Offers Radiaphones

A POST-WAR line of marine radiotelephones was recently announced by Radiation Products, Inc., of Los Angeles. The firm is building five different models of Radiaphones, ranging in size from the Model 25, a small set with an overall size of 12″ x 7″ x 6½″, to the Radiaphone Model 200X, a set that is large enough for any kind of sea duty.

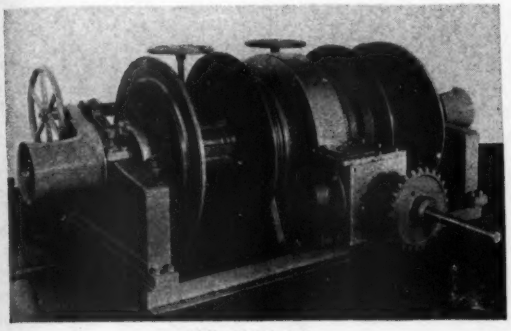
Model 25 is ideal for small boats, where space limitations and moderate investment are important considerations. The set takes full advantage of midget tubes and other recent improvements in the electronic field.

Radiation Products has been building marine radiotelephones for over ten years, and the engineering staff considers the post-war line to be a step forward in small boat communication.



Model 25 Radiaphone made by Radiation Products, Inc.

HATHAWAY WINCHES
Catch 'em Fast
For the High-liners



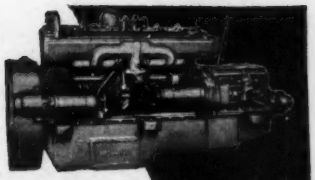
NO. 1335-40

Ten Models that meet
Every Fishing Requirement

HATHAWAY MACHINERY CO.
FAIRHAVEN, MASS.

Complete Deck and Underwater Equipment:
Shafts, Stern Bearings, Stuffing Boxes, Bollards

...in production right now!



THREE Medium-Speed ENGINES—a "six"... and two "fours"... with every wanted feature of modern design. Compact! Rugged! Built to take it and stand up longer. Plenty of smooth, quiet, dependable *working power* at usable engine speeds. Husky enough to do the job of a larger motor when equipped with reduction gear. Available with or without reduction. Widely used by Army, Coast Guard, Navy, and in essential home-front commercial fishing, ferry, utility-boat service.

HIAWATHA SPECIAL
58-90 HP.
6-cyl. 4-in. x 4¼ in.
• INFORMATION ON REQUEST

20-40 HP.
4-cylinder
3¾-in. x 4-in.
"ARROWHEAD JUNIOR"
•
25-45 HP.
4-cylinder
3¾-in. x 4½-in.
"ARROWHEAD"

Red Wing
MARINE ENGINES
OTHER RED WING ENGINE SIZES
20 Gasoline Models: 8 hp. to 125 hp.
Spark Diesel Types: 42 hp. to 125 hp.
(a few available for essential needs)
RED WING MOTOR CO.
RED WING • MINNESOTA

George A. Colley Dies

GEORGE A. Colley, 56, naval architect and partner in the firm of Colley-Maier, Inc., of Boston and New York, died December 7 after a brief illness. Born in Rockport, Mass., he was a graduate of the Webb Naval Academy, New York. He worked as a marine architect in New York for many years before moving to Newton Center 18 years ago.

Mr. Colley remodeled Rear-Admiral Richard E. Byrd's ship, *The Bear*, for the explorer's last trip to the South Pole. In collaboration with the inventor, John Hays Hammond, Jr., Mr. Colley worked out the "gear shift" propeller, an invention which automatically changed a ship's propeller speeds as the ship encountered various types of going. During both World War I and World War II, he was a special designer for the Navy. He was well known in the fishing industry for his work in designing fishing vessels.

Rhode Island Boats Wrecked

A 25' scalloper owned by Tony Giordan of Warwick, R. I. and a 30-footer owned by Clarence Mumford of Oakland Beach recently sank off Rocky Island. The Giordan boat was towing the Mumford craft when they ran into thin ice which punctured the bottoms of the vessels. The two men took to a flat bottom skiff and escaped uninjured.

A 30' fishing boat owned by Everett Cunard was hurled on the rocks of Bristol Harbor, November 22nd. The bottom of the vessel was torn completely out.

New York Landings for November

(Hailing fares. Figure after name indicates number of trips.)

Amelia (1)	36,000	John G. Murley (2)	151,500
Buzz & Billy (3)	31,000	Mary Anne (3)	199,500
Catherine C. (2)	96,000	Noreen (1)	70,000
Felicia (1)	55,000	S #31 (2)	21,000
Florence B. (2)	56,000	Virginia (3)	199,000
J. & E. Riggin (2)	26,700		

Scallop Draggers (Landings in Gallons)

Gloria F. (3)	1,557	S #31 (1)	400
Rosalie F. (3)	1,755	Sunapee (2)	950

BETHLEHEM STEEL

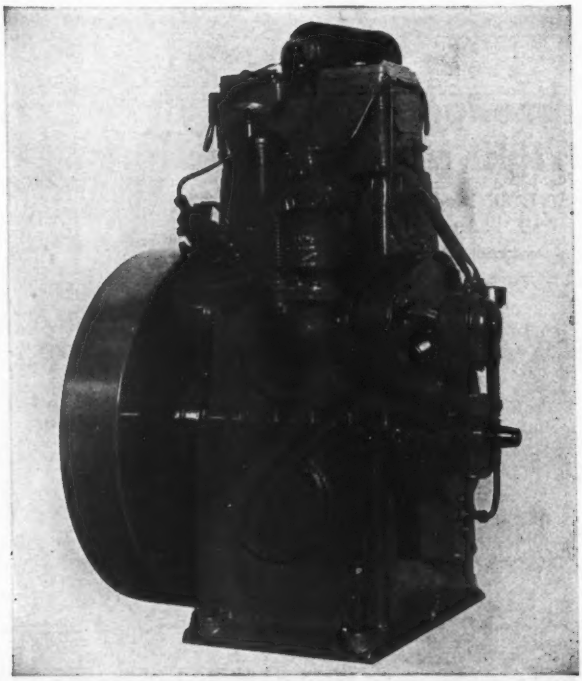
When it's a BETHANIZED *Trawler* ROPE... IT L-A-S-T-S

Corrosion shortens the life of a trawler rope.

But bethanized coating offers the best protection against corrosion, for the bethanizing process applies a heavy, uniform coating of pure zinc to every foot of every wire. This coating is of such high quality that it will not crack, peel, or check, even after repeated bending around small turns.

The exclusive electrolytic process by which the bethanized coating is applied does not sap the base wire of its strength and toughness. That means stronger trawler rope . . . longer life . . . fewer replacements.

when you think WIRE ROPE
. . . think BETHLEHEM



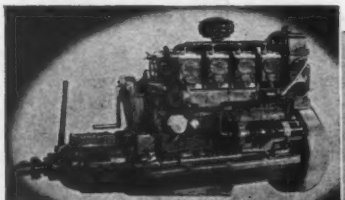
PERFECT DIESEL POWER

for auxiliary equipment

Tough, rugged and dependable are the three words that aptly describe Palmer RND-1 Stationary Diesel Engines. These small power plants are ideal for handling pumps, compressors, generators, winches, hoists and other deck machinery. They have a minimum of working parts, a maximum of durability and can be readily hand-started. Palmer RND-1 engines are giving absolute satisfaction to fishermen and commercial boatmen on both coasts. It will pay you to investigate the reasons.

Write today.

PALMER BROS. ENGINES, INC., COS COB, CONN.



RND 4 cylinder 40 H.P.
RND 6 cylinder 60 H.P.
For marine use and stationary

RND 1 cylinder 9 H.P.
For stationary use only

Palmer also builds gasoline engines ranging from 2 H.P. to 150 H.P. for marine use.

PALMER

PALMER DIESELS

THE FISHERMAN'S FRIEND FOR FIFTY YEARS

Connecticut Holds Harbor Hearing

A HEARING was held in Stonington on December 3 before representatives of the District Engineer's Office, Providence, R. I., on the proposed improvements to Stonington Harbor, Little Narragansett Bay and the Pawcatuck River. It was brought out that Stonington boats are often forced to ride out heavy storms in the harbor rather than at the docks where the swell conditions cause them to hang against each other and the piers. By dredging the harbor more room would be given for the maneuvering of the boats.

"Tip-Top" Has New Owner

Capt. George Brazil of Stonington has purchased the 55′ *Tip-Top*, formerly owned by Capt. George Berg. The boat was built at Stonington Boat Works in 1942, and carries a crew of three men plus the owner, who will skipper her.

Several Boats Repaired and Painted

Among Stonington vessels which were on the railways for repairs during November was the *Irene & Walter*, skippered by Capt. Walter Schroeder, which was at Stonington Boat Works for painting. The *Carol & Dennis*, owned and skippered by Capt. Dennis Cidale, was up for engine repairs, the *Lillian C.*, owned by Joseph Maderia, for painting, and the *Maria Julia*, skippered by Capt. Harold Kolvig, for engine repairs and painting.

"Rosemarie" Lands Big Yellowtail Catch

The *Rosemarie*, Gloucester-owned fishing boat, landed a 221-barrel catch of yellowtails at Stonington on November 30, a near record at the port for the month of November.

Bad Weather Handicaps Fishermen

The Stonington fishing fleet was tied up almost three times as many days as it was able to operate during November due to almost continual storms. It is estimated that there were but 10 good fishing days during the entire month, with only small catches of dabs being made.

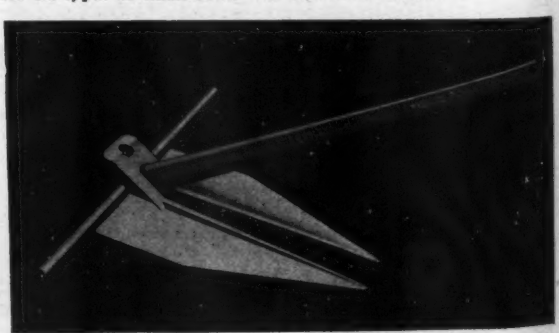
Improved Postwar Danforth Anchor

A NEW Danforth Anchor — the Mark IV — is now in production in sizes from 5 lbs. and up. It is made of heat-treated high tensile alloy steel forgings and rolled steel sections with a tensile strength of over 150,000 lbs. as compared to 57,000 for ordinary steel.

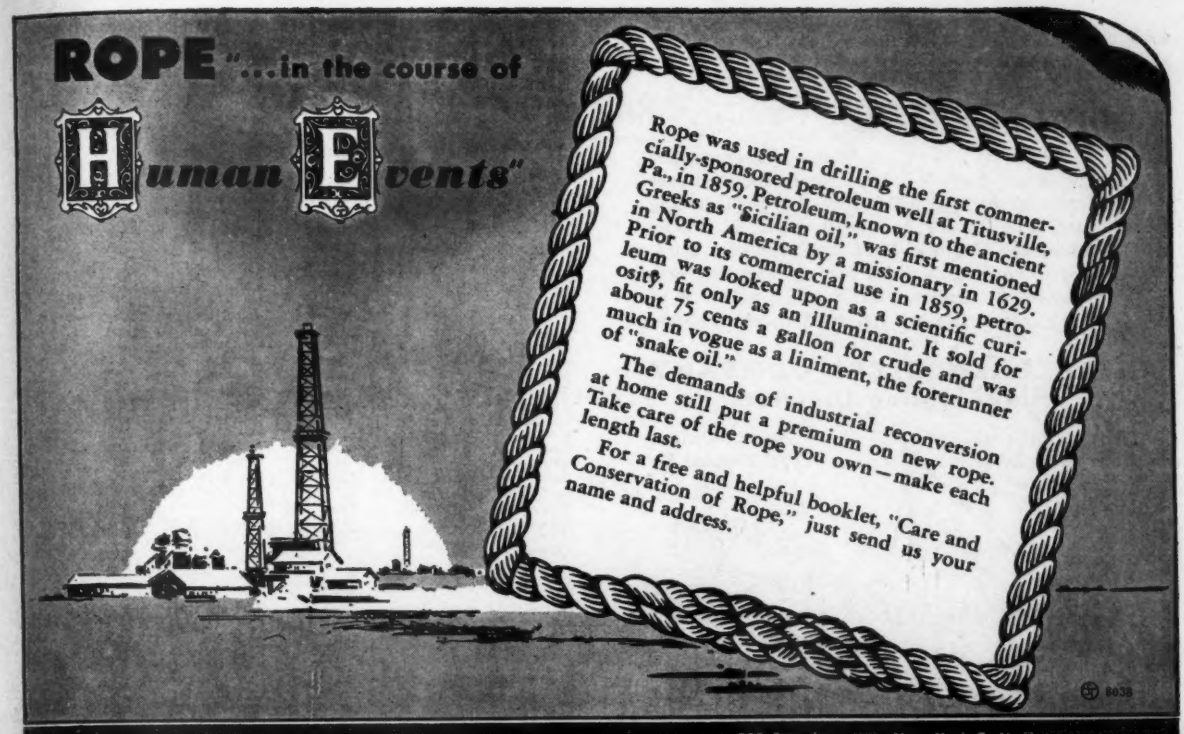
Preliminary plans for the new anchor were developed several years ago but it was not possible to manufacture in quantity during the war. However, a number of experimental anchors were made and tested extensively in actual service on fishing and other types of craft.

The increased strength of the high tensile steel makes it possible to manufacture the new Danforths in the same dimensions but approximately half the present weights. Example: the 30 lb. Mark II "size" weighs only 17 lbs. in the new Mark IV.

All parts are thinner and stronger. This further stream-lining decreases resistance to burial so that the new Danforth Mark IV digs in even faster and holding power per pound of anchor is substantially increased. It has the same features as the current model, but to a more marked degree: it is non-fouling and easy to handle. A special 4 lb. Mark V Danforth "row boat" model for all types of small boats will also be available.



The new Danforth Mark IV anchor.


ROPE "...in the course of
Human Events"
Rope was used in drilling the first commercially-sponsored petroleum well at Titusville, Pa., in 1859. Petroleum, known to the ancient Greeks as "Sicilian oil," was first mentioned in North America by a missionary in 1629. Prior to its commercial use in 1859, petroleum was looked upon as a scientific curiosity, fit only as an illuminant. It sold for about 75 cents a gallon for crude and was much in vogue as a liniment, the forerunner of "snake oil."
The demands of industrial reconversion at home still put a premium on new rope. Take care of the rope you own—make each length last.
For a free and helpful booklet, "Care and Conservation of Rope," just send us your name and address.
NEW BEDFORD CORDAGE CO.
233 Broadway • New York 7, N. Y.
31 St. James Ave. • Boston 16, Massachusetts
325 W. Huron St. • Chicago, Illinois
Mills: New Bedford, Massachusetts

N. H. Lobstermen Hit by Storms

LOBSTER fishing along the New Hampshire coast is at a standstill after recent heavy storms which caused several thousand dollars damage to boats, pots, and buoys, according to Conservation Officer Edwin G. Towne. He stated that there will be practically no lobsters taken from coastal waters during December and many fishermen will not be back in operation until Spring.

After the first storm many lobstermen used up their replacements, and when the second storm hit they were completely wiped out of gear. Ray Lemire of Hampton harbor, found his 32′ boat "iced in" in the upper river after it went adrift in the storm. Carroll Dow of Seabrook found his missing lobster car stranded on the marshes.

Lawley Railway Ready for Fishermen

THE enlarged and modernized marine railway of Geo. Lawley & Son Corp., Neponset, Mass., where vessels 175 feet long and 300 deadweight tons are hauled free of the water and onto dry land within a few minutes for overhaul or quick service is now freed of war demands and available for commercial work.

More than a quarter-mile of new track, mostly under water, has been laid on the railway down a 13.16 per cent incline into the Neponset River and out 273 feet to a depth of more than 15 feet. Moving up and down the rails is a 175 foot cradle of the most efficient and modern type.

During the past few years, the sole use of the marine railway, with the exception of a comparatively few fishing trawlers, has been more than 100 ships kept in fighting trim for the Army and Navy.

The size of the railway makes it possible to handle trawlers, tugs, barges, lighters, tankers and freighters. Mobile cranes alongside the railway handle big lifting jobs with ease and gangways attached to the ship from the cat-walk make it easily accessible for workmen.

FISH WITH CONFIDENCE

A. M. STARR NET CO.
East Hampton, Conn.

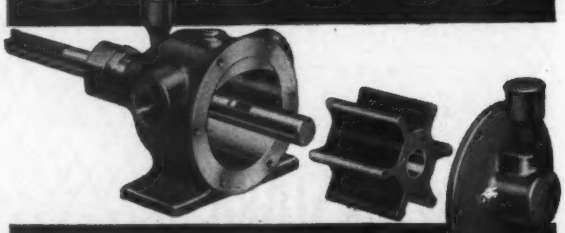
Trawler repairs in the port of BOSTON

With so many trawlers now on war duty, it is more important than ever before to keep those still in service in good running order. Bethlehem's two repair yards in Boston harbor, the Atlantic Yard and Simpson Yard, have unexcelled facilities for repairing and reconditioning trawlers. Get in touch with one of these yards next time you need trawler repairs.

BETHLEHEM STEEL COMPANY
Shipbuilding Division

General Offices: New York, N. Y. *Boston Office: 75 Federal St.*

JABSCO



THE PUMP WITH THE RUBBER IMPELLER

JABSCO PUMP COMPANY
8302-8306 Wilshire Blvd., Beverly Hills, Calif.
Copyright 1945 Jabsco Pump Co.

Gloucester Landings for November

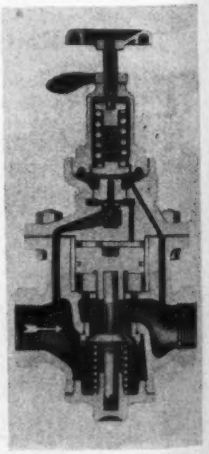
(Hailing fares. Figure after name indicates number of trips.)

Agnes & Myrnie (22)	101,700	Joseph & Lucia (3)	246,000
Alicia (3)	23,000	Josephine P. II (2)	55,000
Alpar (1)	6,000	Joseph S. Mattos (2)	166,000
Alvan T. Fuller (3)	143,000	Killarney (2)	316,000
America (1)	40,000	Lady of Good Voyage (3)	179,000
American Eagle (2)	62,000	Leonora C. (1)	49,000
Andarte (1)	105,000	Leretha (2)	101,100
Angie & Florence (1)	35,000	Linta (1)	85,000
Anna Guarino (2)	28,000	Little Nancy (3)	137,000
Annie II (3)	24,000	Lois T. (21)	187,800
Ariel (6)	31,500	Lou Sam (1)	10,000
Austin W. (2)	135,000	Lucretia (4)	22,000
Automatic (3)	6,500	Madonna (1)	7,000
Ave Maria (3)	59,000	Magellan (2)	103,000
Avocet (1)	4,500	Malolo (2)	150,000
Babe Sears (2)	137,000	Margie and Roy (4)	13,500
Baby Paul (2)	46,000	Marietta and Mary (3)	92,000
Baby Rose (2)	195,000	Mary A. (1)	30,000
Balila (2)	95,000	Mary and Julia (2)	74,000
Barbara C. (6)	29,800	Mary Curtis (1)	115,000
Beatrice & Rose (1)	73,000	Mary M. (2)	35,000
B. Estelle Burke (2)	131,000	Mary W. (1)	80,000
Bonaventure (2)	232,000	Mayflower (2)	50,000
California (1)	10,000	Nancy F. (2)	55,000
Carmela Maria (3)	95,000	Naomi Bruce (23)	140,500
Casco (2)	19,000	Naomi Bruce II (22)	102,800
Caspian (1)	60,000	Naomi Bruce III (22)	139,700
Catherine (20)	82,400	Noah A. (4)	130,000
Catherine Amirault (3)	225,000	No More (8)	15,300
Catherine B. (3)	123,500	Old Glory (3)	98,000
Catherine L. Brown (2)	257,000	Olivia Brown (2)	143,000
Chebeague (4)	83,000	Olympia LaRosa (3)	100,000
Cigar Joe (3)	144,000	Paolina (4)	174,000
Columbia (1)	130,000	Phyllis A. (20)	141,900
Columbo (2)	80,000	Phyllis & Mary (1)	60,000
Corinthian (3)	238,200	Pilgrim (2)	275,000
Curlew (2)	375,000	Pollyanna (1)	49,000
Donald & Johnnie (2)	15,500	Portugal (3)	94,000
Doris F. Amero (1)	45,000	P. T. (5)	21,500
Edith & Lilian (2)	251,000	Puritan (3)	245,000
Edna Fae (21)	122,700	Rainbow (1)	60,000
Eleanor (1)	50,000	Robert and Edwin (2)	5,000
Eliza C. Riggs (5)	30,500	Rose and Lucy (1)	85,000
Emily Brown (2)	246,000	Rosemary (1)	36,000
Emily C. (4)	31,000	Rosie C. (1)	5,000
Enterprise (21)	139,100	Ruth and Margaret (1)	30,000
Ethel (1)	3,000	Sacred Heart (2)	74,500
Eugene H. (2)	97,000	St. Anthony (2)	207,000
Eva M. Martin (5)	23,000	St. Christopher (1)	145,000
Evelina M. Goulart (3)	90,000	St. Paul (2)	71,000
Evelyn G. Sears (3)	150,000	St. Peter II (1)	90,000
Evzone (1)	40,000	St. Providenza (6)	39,000
Falcon (4)	8,500	St. Teresa (2)	55,000
Famiglia (3)	77,000	Salvatore (2)	151,500
Florence & Lee (1)	120,000	Sea Hawk (2)	99,000
Four Sisters (1)	6,000	Sebastiana & Figli (2)	17,000
Frances C. Denehy (2)	145,000	Sebastiana C. (2)	66,000
Frances R. (3)	32,000	Squantum (2)	133,000
Gaetano S. (2)	240,000	Superior (2)	158,000
Golden Eagle (2)	275,000	Susie O. Carver (1)	40,000
Gov. Al Smith (1)	40,000	Theresa M. Boudreau (2)	164,000
Grayling (3)	95,000	Thos. J. Carroll (2)	220,000
Heedja (3)	110,000	Trimembral (2)	11,000
Helen M. (2)	65,000	Two Pals (4)	50,000
Hiram II (3)	106,000	V-E Day (2)	285,000
Holy Family (2)	127,000	Vince (12)	24,600
J. B. Jr. (2)	23,500	Wanderer (6)	240,000
Jennie & Lucia (1)	75,000	We Three (3)	17,000
Joe D'Ambrosio (4)	49,500	Wind (2)	206,000
Joffre (1)	105,000	Yankee (1)	60,000

New Leslie Air Reducing Valve

A NEW improved type of internal pilot operated Air Reducing Valve, known as Class L-1A, has been announced by Leslie Co., 220 Delafield Avenue, Lyndhurst, N. J. Among the main features of this valve, are its stability under all flow conditions, and its responsive instant reaction to wide and sudden variations in load. Plastic inserts in the valve seats provide tight shutoff and long life. Corrosion and wear resistance are obtained by the use of a stainless steel main valve, a bronze controlling valve and corrosion resistant piston rings.

The valve is available in sizes ½" through 4" inclusive, designed for initial pressures up to 400 air pressure and reduced pressures from 5 to 300 psi. A similar valve designed for accurate control of small air valves is known as class JA-1 in ¼", ⅜" and ½" size and is similar in construction except that a neoprene diaphragm is used in lieu of the bronze piston. This valve has the same initial pressure range and will control reduced pressures from 1 to 300 psi.



Leslie air reducing valve.

MACK goes where the Going's Tough!...

The S. S. Shatford is 75 x 19 x 6, powered with a 605-W Mack Mariner Diesel with 4.38 to 1 reduction gear. She is equipped with a 50 x 30 propeller.

The S. S. Shatford is a tank lighter operating out of Halifax, N. S. That means working in swift running tides and rough weather, along a rugged coast . . . Tough conditions that demand the best of a man, a boat, and an engine!

When it came to choosing an engine, the Imperial Oil Company, owners of the Shatford, picked a Mack Mariner Diesel. They knew that for tough jobs, you can't beat a Mack!

.Mack Mariners are built specifically for marine operations, and meet the highest standards of the industry. These engines have all the extra stamina, dependability, and efficiency, that the Mack name implies. That's why you get more engine, more work, and more satisfaction when you get a Mack Mariner.

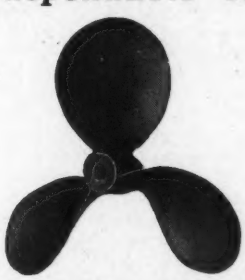
MACK MANUFACTURING CORPORATION
MARINE ENGINE DIVISION, EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

Mack

DIESEL MARINE POWER

Mack Marine Engines Are A Product Of The Builders Of World-Famed Gasoline and Diesel-Powered Trucks, Buses and Fire Apparatus.

The "High Liners" must have efficient, dependable equipment



52" and LARGER

Where lives as well as profits are at stake both owners and skippers realize the necessity of using propellers of proven quality. That is why you will find Hyde Propellers on the "high liners" of the fishing fleet. Let the experience of the men who know be your guide—specify Hyde.

HYDE
PROPELLERS

EFFICIENT . . . RELIABLE
ALWAYS GET HOME SAFELY
HYDE WINDLASS COMPANY, Bath, Maine

TRAWL DOORS

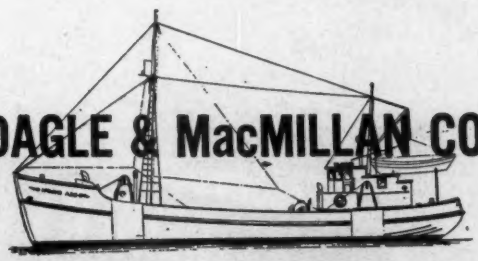
Scientifically Designed — Strongly Built
Made in all Sizes and Weights
For Every Dragging Need

FUEL and WATER TANKS

Welded Black Iron and Galvanized

DECK GEAR

Gallows Frames - Bollards - Blocks - Fittings
Swivels - Coupling Hooks - Anchors



DAGLE & MacMILLAN CO.

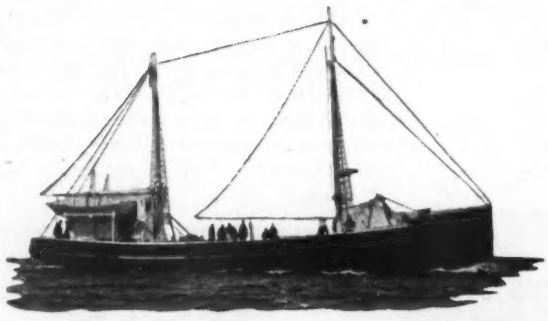
170 Border St. East Boston, Mass.

Everything in Iron Work for Fishing Boats

PAINT
that stands
the gaff

Pettit Paints—developed through years devoted exclusively to the manufacture of superb marine finishes . . . have naturally gone to war to help protect Uncle Sam's great fleet of fighting craft. They're serving on the home front, too, by protecting many of our essential fishing fleets. So, to assure a completely satisfactory job on your next overhaul, specify Pettit Paints—the best marine insurance money can buy.

PETTIT PAINT CO., INC.
Belleville, N. J.



PAINT since 1861 PETTIT
AND SEE WHAT SERVICE MEANS.

REINER

REINER Marine
Auxiliary Unit

Generating Sets
and
Auxiliary Units

You need auxiliary power . . . auxiliary air . . . auxiliary pumping capacity. With a Reiner Auxiliary Unit you don't have to fit your requirements into the "nearest" unit. Rather the above equipment is selected to fit your requirements and then assembled into a compact unit. That's what makes Reiner Auxiliary Units the better buy . . . what has influenced such exacting buyers as the Army, Navy, Coast Guard and Maritime Commission to accept Reiner.

JOHN REINER & CO
12-12 37th AVENUE, LONG ISLAND CITY 1, N. Y.

12-RC-5

New Brunswick Suffers Heavy Storm Damage

By C. A. Dixon

WHARVES, buildings and great quantities of fishing equipment were swept away or demolished in New Brunswick in the easterly storm of November 20th. The Government pier at Leonardville was destroyed, while the one at Wilson's Beach was badly damaged. The middle of the breakwater at Wilson's Beach was swept out and the fish curing stand of Jackson Bros. and its two wharves were destroyed. As a result, fishermen have been forced to keep their boats at Head Harbor, which makes fishing inconvenient.

More than 30 fish stands on Campobello Island were destroyed, and weir owners lost all their weirs located on the seaward side of the Island. Some, if not all of them had been fitted with costly twine tops with the expectation that a late Fall school of fish would be caught.

Deer Island was hard hit as were Grand Manan and other places along the mainland shore of Charlotte County. The Leonardville waterfront at Deer Island was almost swept bare of fish stands, and the public wharf there was demolished, carrying with it the freight shed, floating slip, and a large freight boat owned by Connors Bros., Ltd., of Black's Harbor. Frank Holmes of Lambertville lost his sardine boat and smaller boats were damaged or lost, as were seines and other equipment.

At Grand Manan three wharves were washed away and others damaged. Ross Cronk was the heaviest individual loser there, his loss being estimated at $5,000. Several stands were demolished at Ingall's Head and at Woodward's Cove.

Lobster Catch Records Broken

Although unfavorable weather conditions prevailed when the 1945 lobster fishing season opened in southern New Brunswick on November 15 and continued during the remainder of the month, individual catch records and probably total catch records were broken. Vern Urquhart of Grand Harbor caught 1,503 lbs. the first day and two Seal Cove men caught 2,500 lbs.

Competition among buyers resulted in a price of 51c a pound to the fishermen. It is expected, however, that with the opening of the lobster fishing season in western Nova Scotia, prices will become lower. No Grand Manan lobsters were impounded due to the high prices and keen demand.

Late Sardine Herring Strike

An unexpected strike of sardine herring took place during the latter part of November. At Deer Island weirs that were undamaged by the storm commenced to catch anywhere from 10 to 60 hogsheads of fish, and although the larger catches were confined to a small number of weirs, the school was quite generally distributed and much money was made by both weirmen and scalers. It was reported that more than $1,000 worth of herring and $200 worth of scales were taken from one weir in a single tide. Fishermen say the run of sardines may last until Christmas or later.

They are looking forward to a good Winter of purse seining. Two separate schools of herring, one of large size fish and the other small fish, are inhabiting the weir fishing areas of West Isles, which augurs well for Winter fishing.

Subsidies Expected to Encourage New Construction

As the result of a subsidy plan provided by the Canadian Department of Fisheries in 1942 and the increased availability of materials and skilled labor, shipyards are expecting considerable new construction, as well as the conversion of older ships. The subsidy plan allows for the payment of $165 per ton, gross tonnage, on the cost of constructing Atlantic fishing vessels of the dragger type, not less than 72′ in length. A similar plan for converting schooners is also available.

The plans of all vessels built under the project must be submitted for approval to the Department of Transport before a grant will be made. Applicants whose plans are approved enter into an agreement with the Federal Government to engage in fishing for 5 years from the date of the completion of the vessel, with provisions and forfeitures. Progress payments are made during the period of construction, using 75 per cent of the estimated gross tonnage as a basis of reckoning, and the registered gross tonnage on completion is taken as the final basis for payment. No vessel may be sold during the five-year period, except by permission of the Federal authorities.

"Columbians on the Pride of our Fleet"

"Sylvia," 52', and "Marcia Sherrill," 56', are new boats owned by Shaw Shrimp Company, Jacksonville, Fla., and built by Diesel Engine Sales Co., St. Augustine, Fla.

"We're thoroughly satisfied with Columbian Propellers," says John Shaw, of the firm; "another Columbian Bronze is now being installed on another new boat of ours just being outfitted, the 'Little John'. This last boat is a 65-footer, our best yet, and the fact that we picked Columbian Bronze for the pride of our fleet shows what we think of this make of propeller."

COLUMBIAN BRONZE CORPORATION
Freeport, Long Island, New York

REPAIRS ALTERATIONS To FISHING BOATS

We have facilities, manpower and experience to do any kind of repair or re-conditioning job to wooden hulls, Diesel or gasoline engines, rigging. Our many satisfied customers attest the dependability of our work.
May we serve you?

SOUTHWEST BOAT CORPORATION
SOUTHWEST HARBOR - ME.

EDSON

Announces
A Complete Line of
MARINE ENGINES
Heavy Duty — Medium Duty
High Speed

PARTS - SERVICE - SALES

COMPLETE STEERING EQUIPMENT

Wheels-Quadrants
Gears-Sheaves
Shock Absorbers

EDSON NON-CHOKABLE BILGE PUMPS
Hand Operated in Four Sizes

The EDSON Corporation
49 D Street Phone 3041 South Boston, Mass.

DESIGNERS AND BUILDERS OF PUMPS FOR SPECIAL NEEDS. Famous for soundly engineered reliability, Marine Products has set a record for world-wide service and low maintenance costs. Use M-P equipment in your field.

Industrial MP Marine
ENGINEERED EQUIPMENT
MARINE PRODUCTS COMPANY
6636 CHARLEVOIX AVE. • DETROIT 7, MICHIGAN

DeWitt AMERICAN-MADE
FISH HOOKS
All Styles, Sizes and Finishes
Write for Catalog
Bill DeWitt Baits
DIVISION OF SHOE FORM CO. INC.
Auburn, New York
U. S. A.

Vineyard Showing Increased Interest in Shellfish

By J. C. Allen

NOVEMBER has been a very uneventful month in these latitudes, except for the increasing interest in the shellfisheries. The opening of the bay scallop season in most of the Island towns, plus the continued windy weather which discouraged other lines of endeavor afloat, has brought the matter forcibly before the public.

For the past 20 years the interest in these fisheries has increased, almost from year to year. Twenty-five years ago the number of men engaged in taking scallops and quahogs was comparatively small. This year, in spite of the labor shortage, it is expected that there will be close to 600 commercial licenses issued in the various towns before the season closes. It has been estimated roughly that when the first of the scallop beds was opened on November 1st, the daily yield in the three towns that were fishing was in excess of $5,000 a day.

Black Market Operations

Coincident with the opening of the season, the report of black market operations was heard, and in support of these reports local retailers were found to be selling few scallops, if any. Now admittedly, the black market is a lousy institution in all its ways and works. It is damned poor business to violate the law in any event, but the operation of ceilings in these bearings has served to show how unreasonable the OPA system is.

The top price being offered by the black market for scallops is $6.00 a gallon, according to popular gossip. From that point, it decreases to somewhere around $5.25. The ceiling price is $4.10. Now we have files showing that 25 years ago the legitimate market paid the fishermen $7.50 for their scallops, so the black market is not such a piratical institution in this case as it may seem, and it is our belief that if the fishermen of 25 years ago could not have collected over $4.10 a gallon for scallops, the majority wouldn't have bothered to fish.

After all, it sounds big for a man to collect maybe 80 to 90 dollars in a week's scalloping, but it should be remembered that he can't start to fish until he has invested something over one hundred berries, at the least calculation, for boat, dredge, rope, oilers, boots, commercial license, official sacks and probably a rake or net and a water-glass. Secondhand gear would probably keep the price down to $100, but all new equipment would run higher. He is not likely to enjoy top-notch fishing more than two weeks in most of the towns, and after that things go slower. We do not excuse any man for breaking the law for gain, but these things which we know and can prove make it much easier for us to understand why it is so widely done by pretty good citizens.

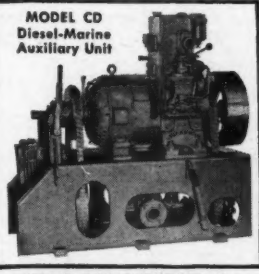
Fishermen Handicapped by Windy Weather

The quest of the free-swimming fish by our local fleet has been handicapped to a degree beyond any similar period that we can recall. We cannot remember a Fall since we first saw daylight when there has been as much windy weather. We cut the wake of one skipper of a good-sized one-man boat, a man who has followed the sea all his life and who has no fear of ordinary kinks to be encountered. He informed us that he had fished just 6 days in a month's time. He just couldn't handle gear at all the rest of the time.

Of course this hasn't been true of larger craft. Yet they have had their bumps, too, and the Fall season has been comparatively lean as might be supposed. High prices have helped plenty in keeping things going, and the most cagey of our local skippers almost always can find a pod of fish somewhere, but the weather has hurt, just the same.

Alongshore the cod has continued to run, chock to the breakers, the tautog likewise, and the mackerel and striped bass whenever the wind was off the land. Butters ran latest, around the traps, and quite a bunch were taken while the rods and reels were still operating off the headlands and docks, as the month went to leeward.

The weather has remained moderate, past the middle of the month, with bait schooling everywhere. A few miles sou'west of us the seiners knocked the mackerel for a row of bushel trawl-tubs, and nobody so much as shivered up to the fifteenth of the month.

SPACE SAVER!
POWER • LIGHT
WATER • AIR
All in One Compact Package!
ENGINE—8 h.p.
GENERATOR—3½ or 5 kw.
AIR COMPRESSOR—11 or 20 c.f.m.
PUMP—60 or 90 g.p.m. at 60 lbs.
Net Weight—1,400 pounds.
Other combinations to 10 kw. and Diesel-Generator sets available.
MODEL CD Diesel-Marine Auxiliary Unit

WRITE FOR BULLETIN 151
Desirable territories open for factory representatives. Write.
LISTER-BLACKSTONE, INC.
6619 W. Mitchell Street MILWAUKEE 14, WISCONSIN, U.S.A.

New "Ivalite" Spotlights

ARNOLT Motor Company, Warsaw, Indiana, is presenting its new post-war line of Ivalite Marine Spotlights. There are two styles for remote control, and two styles for direct control. The head can be completely rotated, raised or lowered by means of a single push-pull-turn control knob mounted in the ceiling of the pilot house.

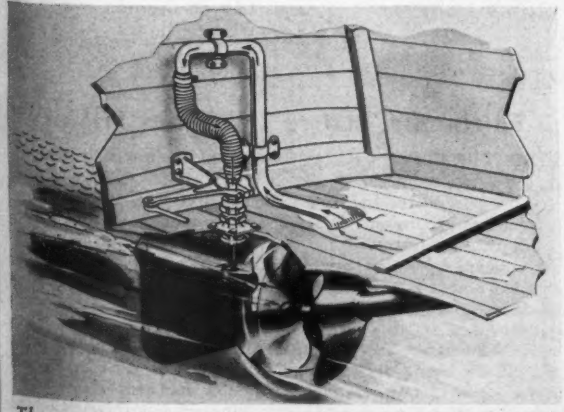
The remote control models permit placing the head anywhere on the deck and controlling it by means of a patented flexible cable and a cam bar. A feature of the Ivalite is its "perma-contact" system of making electrical connections. Turning the head does not twist the wires and cause broken insulation. All wires and mechanisms are fully enclosed in a watertight mounting.

What is believed to be an innovation is the use of Sealed-Beam bulbs. The bulb reflector and lens are all in one unit which is air and moisture-proof. They are of all brass and bronze construction for fresh water and salt water use and are finished in chrome. A new brochure, describing Ivalites in detail, is now available.

Federal-Mogul Bilge Bailing Rudder

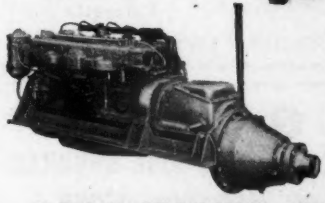
A NEW type rudder developed by Federal-Mogul Marine incorporates an automatic bilge bailer and is marketed under trade name Equi-Jector. This new rudder has a venturi injector integral with the rudder in such a manner and location that it's action is augmented by the propeller slip stream resulting in an automatic bailer effective at speeds as low as four or five miles an hour. In addition, by throwing in the clutch, Equi-Jector can be used to pump out the boat when it is tied to the dock.

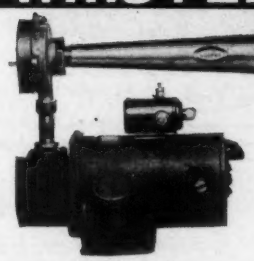
The volumetic efficiency of the Equi-Jector is such that when there is no water left in the bilge it acts as a constant exhaust while the boat is underway thus eliminating bilge fumes and the attendant danger. Equi-Jector sets up no resistance to boat speed, absorbs no engine power and costs nothing to operate.



The new Equi-Jector rudder, manufactured by Federal-Mogul

FISHERMEN THE TIME TO BUILD IS NOW!!!
Several newly designed draggers now under construction in our Yard
Send for plans and specifications
Repair Service
Two Marine Railways Available At All Times
Complete line of Marine Equipment Including Diesel and Gasoline Engines
New Jersey Distributors for JABSCO PUMPS
Delaware Bay Shipbuilding Co., Inc.
Leesburg, New Jersey

HEAVY DUTY MODELS FOR COMMERCIAL FISHING BOATS
Write for Free Catalog
GRAY
MARINE MOTORS
GASOLINE
DIESEL

GRAY MARINE MOTOR CO.
646 Canton Ave. Detroit 7, Michigan

HORNS-WHISTLES
"Electro-Phonic" Air Signal
Defense against Every Emergency—the Fisherman's Sentinel — Protects Lives and Investment.
Electro-Phonic Powerful Air Signal Supplies its own compressed air—no tank, no valves, no piping.
Unexcelled for Fog Penetration, Echo Signals, and Reliability.
Types, sizes for all Marine Needs—Mechanical Fog Horns.

Model EP-SIF
CLARK COOPER CO. 325 N. MARKET ST. PALMYRA, N. J.

BUDA MARINE ENGINES
DIESEL or GASOLINE . . 20 to 340 H.P.
• GENERATOR SETS
• AUXILIARY & PROPULSION ENGINES
WRITE OR WIRE FOR FULL INFORMATION
THE BUDA CO. HARVEY (Chicago Suburb) ILLINOIS

FISHERMAN DESIGNS
60 to 112 feet
Numerous Plans Available of Boats Already Built
ALBERT E. CONDON
7 Wood Street Fairhaven, Mass.

ELDREDGE - McINNIS, Inc.
NAVAL ARCHITECTS
And MARINE ENGINEERS
131 State Street Telephone HUBbard 2910
BOSTON 9, MASS.

COLLEY - MAIER, INC.
Naval Architects and Marine Engineers
92 State Street
Boston 9, Mass. Lafayette 5335
In New York—25 West 43rd St.

JOHN G. ALDEN
NAVAL ARCHITECT MARINE ENGINEER
Specializing in Diesel vessel design
131 STATE STREET BOSTON, MASS.
In New York — 607 Fifth Avenue

GIELOW INCORPORATED
NAVAL ARCHITECTS
MARINE ENGINEERS
Designers of All Types of Fishing Vessels
25 West 43rd Street
New York 18, N. Y.

WILLIAM J.
DEED
NAVAL ARCHITECT
FISHING VESSEL DESIGNS
154 NASSAU ST. NEW YORK

MAIERFORM OF AMERICA, INC.
Hull Designs for Seagoing Vessels
25 West 43rd Street
New York 18, N. Y. Bryant 9-8675
In Boston—92 State Street

BELLAMY ENGINEERING CO.
Designers & Furnishers of Modern Filleting Plants
"DRESCO" Belting
Worm and Helical Gear Units — Flexible Couplings
302 Walnut St. Newtonville 60, Mass.
Telephone BIGelow 7449

New Bedford Landings for November

(Hailing fares. Figure after name indicates number of trips.)

Addie Mae (5)	73,000	Ivanhoe (2)	49,000
Adele K. (2)	69,000	Janet & Jean (3)	103,000
Adventurer (3)	78,000	Jerry & Jimmy (1)	78,500
Agda (4)	109,000	J. Henry Smith (3)	47,000
Alba V. (1)	3,000	Joan & Ursula (3)	82,200
Alice J. Hathaway (2)	75,500	Johnny Boy (2)	45,500
Alice May (2)	8,000	Josephine & Mary (2)	138,500
Aloha (2)	51,000	Julia K. (4)	65,000
Alva (4)	50,500	Junojaes (3)	265,000
Alva L. Beal (3)	35,000	Kelbarsam (4)	101,000
Amelia R. (1)	10,000	Liboria C. (3)	88,000
America (1)	35,000	Linnea (3)	73,000
American Eagle (1)	5,000	Louise (3)	195,000
Anastasia E. (4)	53,500	Madeline (2)	28,000
Angeline (3)	12,000	Madonna (1)	30,000
Angie & Florence (2)	73,000	Major J. Casey (2)	55,000
Anna (4)	28,000	Mary & Joan (2)	96,000
Anna C. (1)	3,000	Marie & Katherine (3)	40,000
Anna C. Perry (3)	52,500	Marjorie (1)	1,500
Ann & Marie (4)	23,000	Martha E. Murley (3)	75,800
Annie M. Jackson (2)	47,000	Mary Grace (2)	80,000
Antonina (3)	135,000	Mary J. Hayes (2)	93,000
Arnold (3)	94,000	Mary J. Landry (3)	55,000
Barbara Tee (2)	13,800	Mary Tapper (2)	84,000
Bernice (2)	18,000	Mary W. (1)	60,000
Bessie (2)	16,000	Mildred & Myra (1)	1,000
Bethulia (1)	40,000	Minnie V. (4)	47,500
Bozo (2)	22,500	Mishaum (2)	11,000
California (1)	3,000	Molly and Jane (2)	55,000
Camden (2)	63,000	Moonglo (1)	28,000
Capt. Drum (3)	90,000	Nashawena (3)	47,000
Carlo & Vince (2)	82,000	Natale III (1)	7,000
Carolyn & Gary (5)	92,000	Nautilus (1)	22,000
Catherine & Mary (1)	3,500	Nellie (3)	41,000
Catherine T. (1)	22,000	New Bedford (3)	101,000
Charles E. Beckman (3)	57,000	New Dawn (1)	20,000
Chas. M. Fauci II (2)	6,000	Newfoundland (2)	81,000
Christina J. (3)	90,000	Nobadeer (3)	39,000
Clara T. (1)	12,000	Noreen (1)	60,000
Clifton (3)	39,000	Palmers Island (4)	28,000
Clinton (2)	13,600	Pearl Harbor (2)	61,000
Connie F. (3)	105,000	Pelican (3)	122,000
Dauntless (2)	37,000	Penquin (1)	39,500
Dawn (1)	3,000	Phyllis J. (2)	32,500
Diana A. (1)	76,500	Priscilla (3)	19,500
Doris (2)	4,000	Priscilla (Chilmark) (2)	32,000
Driftwood (1)	12,000	Quest (1)	11,000
Ebeneezer (2)	12,000	Ramona (2)	49,000
E-C (2)	25,000	Renena (2)	30,000
Eleanor (1)	12,000	Richard and Arnold (5)	22,000
Elva (3)	24,000	Ronald & Dorothy (3)	79,500
Elva & Estelle (2)	57,000	Rose & Lucy (2)	47,000
Emma Marie (3)	50,000	Rose Jarvis (3)	57,500
Etta K. (3)	96,000	Rose Marie (2)	140,000
Eunice-Lilian (2)	65,000	Rosie and Gracie (2)	135,000
Fairhaven (2)	81,000	R. W. Griffin, Jr. (2)	83,000
Flavia (3)	27,000	St. Ann (1)	51,000
Florence & Lee (1)	190,000	St. Anthony (2)	44,000
Four Sisters (2)	58,000	St. Joseph (1)	63,000
Frances R. (2)	52,000	Sankaty Head (4)	86,000
Frankie & Rose (2)	80,000	Sea Hawk (1)	26,000
Fred Henry (2)	27,000	Sea Ranger (3)	118,000
Gladys & Mary (1)	80,000	Serafina N. (1)	70,000
Gloucester (1)	20,000	Serafina II (2)	110,000
Growler (2)	68,000	Skilligolee (2)	125,000
Gud Kay (2)	35,000	Solveig J. (3)	102,000
Gull (2)	17,000	Stanley B. Butler (4)	295,000
Harold (1)	5,000	Susie O'Carver (2)	59,000
Harriet N. Eldridge (1)	63,000	Two Brothers (3)	26,000
Hazel S. (3)	61,000	Venture I (2)	79,000
Hilda (1)	18,000	Viking (3)	123,000
Hilda Garston (2)	243,000	Viking (Chilmark) (1)	12,000
Hiram II (1)	12,000	Wamsutta (3)	180,000
Hope (4)	62,000	Whaler (3)	93,000
Ida & Joseph (1)	30,000	William Chesebrough (1)	32,000
Intrepid (1)	7,500		

Scallop Draggers (Landings in Gallons)

Abram H. (2)	1,400	Linus S. Eldridge (2)	2,900
Acushnet (1)	800	Louis Thebaud (3)	1,900
Antonio (1)	600	Margie & Pat (1)	1,300
Captain Ist (1)	1,200	Mary D'Eon (1)	1,300
Carol & Estelle (2)	1,150	Olive Williams (1)	700
Catherine & Mary (1)	1,200	Palestine (1)	1,500
Dagny (1)	1,500	The Friars (1)	800
Emily H. (2)	600	Ursula M. Norton (3)	3,500
Francis J. Manta (1)	1,350	Viking (1)	1,300
Friendship (1)	300		

Fairbanks, Morse Publishes History

CELEBRATING its 115th year of industrial pioneering, Fairbanks, Morse & Co. has published a 160 page book, "Pioneers In Industry", which narrates the company's growth and expansion through free enterprise from 1830 to 1945.

Beautifully illustrated and well written, the history tells of the company's modest beginning in 1830 when Thaddeus Fairbanks invented a weighing machine in St. Johnsbury, Vt. From then on, up through the years the growth of the company is written against the background of America's history. The book relates how the inventive genius of Thaddeus Fairbanks and the merchandising and industrial genius of Charles Hosmer Morse built an organization which now has nine plants and a network of branch offices in this country and throughout the world.

Where-to-Buy Directory

Companies whose names are starred (*) have display advertisements in this issue; see Index to Advertisers for page numbers.

ALARM SIGNALS
*Clark Cooper Co., 319 N. Market St., Palmyra, N. J.

ANCHORS
*R. S. Danforth, 2121 Allston Way, Berkeley, Calif.

ANCHOR-GRAPNELS
Chas. D. Briddell, Inc., Crisfield, Md.

BATTERIES, STORAGE
"Exide": Electric Storage Battery Co., Allegheny Ave. and 19th St., Philadelphia, Pa.
*Willard Storage Battery Co., Cleveland, Ohio.

CAN MANUFACTURERS
Continental Can Co., 100 E. 42nd St., New York, N. Y.

CLAM KNIVES, TONGS, RAKES
Chas. D. Briddell, Inc., Crisfield, Md.

CLUTCHES
Kinney Manufacturing Co., 5341 Washington St., Boston, Mass.

COLD STORAGES
Quaker City Cold Storage Co., Philadelphia, Pa.

CORDAGE MANUFACTURERS
*American Manufacturing Co., Noble and West Sts., Brooklyn, N. Y.
*Columbian Rope Co., Auburn, N. Y.
*New Bedford Cordage Co., 233 Broadway, New York, N. Y.
Plymouth Cordage Co., Plymouth, Mass.

CYLINDER LINERS, PISTONS, RINGS
Hunt-Spiller Manufacturing Co., 383 Dorchester Ave., Boston, Mass.

DEPTH FINDERS
*Marine Division, Bendix Aviation Corp., Norwood, Mass.
*Bludworth Marine, 100 Gold St., New York 7, N. Y.
*Submarine Signal Co., 160 State St., Boston, Mass.

DIESEL AUXILIARY SETS
Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.
*Lister-Blackstone, Inc., 1706 So. 68th St., Milwaukee, Wis.
*John Reiner & Company, 12-12 37th Ave., Long Island City, N. Y.
R. H. Sheppard Co., 330 Middle St., Hanover, Pa.

DISTRESS SIGNALS
Aerial Products, Inc., Merrick, L. I., N. Y.

ELECTRICAL EQUIPMENT
Diehl Manufacturing Co., 240 Congress St., Boston, Mass.
General Electric Co., Schenectady, N. Y.
Sperry Gyroscope Co., Inc., Great Neck, N. Y.

ELECTROLYSIS ELIMINATION
Hamilton Engineering Co., P. O. Box 1893, Boston, Mass.

ENGINE MANUFACTURERS
*Atlas Imperial Diesel Engine Co., 115 Broad St., New York, N. Y.
*The Buda Co., Harvey, Ill.
Caterpillar Tractor Co., Peoria, Ill.
*Chrysler Corporation, 12211 East Jefferson, Detroit, Michigan.
Cooper-Bessemer Corp., Mount Vernon, O.
*Cummins Engine Co., Columbus, Ind.
Detroit Diesel Engine Division, General Motors Corp., Series 71 Marine Diesel, 13400 W. Outer Drive, Detroit 23, Michigan.
*Enterprise Engine & Foundry Co., 18th and Florida Sts., San Francisco 10, Calif.
*Fairbanks, Morse & Co., Chicago, Ill.
*Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.
*Joshua Hendy Iron Works, Sunnyvale, Calif.
The Lathrop Engine Co., Mystic, Conn.
*Lister-Blackstone, Inc., 1706 So. 68th St., Milwaukee, Wis.
*Mack Mfg. Corp., Empire State Building, New York 1, N. Y.
*Murphy Diesel Co., 5317 West Burnham St., Milwaukee, Wis.
*The National Supply Co., Superior Diesels, Springfield, Ohio.
*Osco Motors Corp., 2020 E. Orleans St., Philadelphia 34, Pa.
*Palmer Bros. Engines, Inc., Cos Cob, Conn.
*Red Wing Motor Co., Red Wing, Minnesota.
*Wolverine Motor Works Inc., 1 Union Ave., Bridgeport, Conn.
Worthington Pump & Machinery Corp., 421 Worthington Ave., Harrison, N. J.

Ford Conversions and Parts
*Osco Motors Corp., 3648A No. Lawrence St., Philadelphia, Pa.

Gasoline Engines
*Gray Marine Motor Co., 646 Canton Ave., Detroit, Mich.

ENGINE DEALERS
Harbor Supply Oil Co., 39 Portland Pier, Portland, Me.
Walter H. Moreton Corp., 1045 Commonwealth Ave., Boston, Mass.
*H. O. Penn Machinery Co., Inc., East River and 140th St., New York, N. Y.
*Southworth Machine Co., 30 Warren Ave., Portland, Me.

EXHAUST HOSE
Bendix Aviation Corp., Philadelphia, Pa.

EXHAUST SILENCERS
John T. Love Welding Co., Walen's Wharf, Wharf St., Gloucester, Mass.
*The Maxim Silencer Co., 74 Homestead Ave., Hartford, Conn.

FISHING GEAR
*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

FISH MEAL MACHINERY
*Enterprise Engine & Foundry Co., Process Machinery Div., 18th and Florida Sts., San Francisco, Calif.

FISH SCALERS
Portable, Flexible Shaft
N. A. Strand & Co., 5001 N. Wolcott Ave., Chicago, Ill.

FLOATS
J. H. Shepherd Son & Co., 1820 East Ave., Elyria, Ohio.

FOG HORNS
*Clark Cooper Co., 319 N. Market St., Palmyra, N. J.
L. D. Lothrop Sons, Gloucester, Mass.

HOOKS, FISH
*Bill DeWitt Baits, Hook Mfrs., Auburn, N. Y.

ICE PICKS
Chas. D. Briddell, Inc., Crisfield, Md.

LIFEBOATS
*Lane Lifeboat & Davit Corp., 40 Road and Flushing River, Flushing, N. Y.

NAUTICAL INSTRUMENTS
*Kelvin-White Co., 90 State St., Boston, Mass.
Sperry Gyroscope Co., Inc., Great Neck, N. Y.

NETS AND NETTING
W. A. Augur, Inc., 35 Fulton St., New York, N. Y.
*R. J. Ederer Co., 540 Orleans St., Chicago, Ill.
The Fish Net & Twine Company, 310-312 Bergen Ave., Jersey City, N. J.
*The Linen Thread Co., Inc., 105 Maplewood Ave., Gloucester, Mass.
*Pauls Fish Net Company, 357 West Ohio Street, Chicago 10, Illinois.
*A. M. Starr Net Co., East Hampton, Conn.

OILED CLOTHING
H. M. Sawyer & Son Co., East Cambridge, Mass.

OIL FILTERS
Hamilton Engineering Co., P. O. Box 1893, Boston, Mass.

OILS
*Gulf Oil Corp., Gulf Bldg., Pittsburgh, Pa.

OYSTER KNIVES, TONGS
Chas. D. Briddell, Inc., Crisfield, Md.

PRESERVATIVES
"Campbell's Copper Compound": International Chain & Mfg. Co., York, Pa.

PAINTS
International Paint Co., Inc., 21 West St., New York, N. Y.
*Pettit Paint Co., Belleville, N. J.

PROPELLERS
*Columbian Bronze Corp., Freeport, N. Y.
Federal-Mogul Marine Div., 4033-91 Beaufait Ave., Detroit, Michigan.
*Hyde Windlass Co., Bath, Me.
*Michigan Wheel Co., Grand Rapids, Mich.

PUMPS
*The Edson Corp., 49 D Street, South Boston, Mass.
*Jabsco Pump Co., 8302 Wilshire Blvd., Beverly Hills, Calif.
*Marine Products Co., 6636 Charlevoix Ave., Detroit 7, Mich.

RADIO DIRECTION FINDERS
*Bludworth Marine, 100 Gold St., New York 7, N. Y.

RADIO TELEPHONES
The Hallicrafters Co., 2611 S. Indiana Ave., Chicago, Ill.
Jefferson-Travis Radio Mfg. Corp., 245 East 23rd St., New York 10, N. Y.
*Radiation Products, Inc., Dept. 20, 1142 Wall St., Los Angeles 15, Calif.

RANGES
*"Shipmate": Stamford Foundry Co., Stamford, Conn.
*Elisha Webb & Son Co., 135 So. Front St., Philadelphia 6, Pa.

REVERSE AND REDUCTION GEARS
Snow-Nabstedt Gear Corp., Welden St., Hamden, Conn.
*Twin Disc Clutch Co., 1341 Racine St., Racine, Wis.

RUBBER BOOTS
*U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

RUBBER CLOTHING
*U. S. Rubber Co., 1230 Sixth Ave., New York 20, N. Y.

SEAFOOD TOOLS
Chas. D. Briddell, Inc., Crisfield, Md.

SHIPBUILDERS, BOATYARDS
*Bethlehem Steel Co., Shipbuilding Division, Bethlehem, Pa.
*Delaware Bay Shipbuilding Co., Inc., Leesburg, N. J.
Essex Boat Works, Inc., Essex, Conn.
*Higgins Industries, Inc., 1755 St. Charles Ave., New Orleans, La.
J. K. Welding Co., Inc., 3 Federal St., Yonkers 5, New York.
*Geo. Lawley & Son Corp., Neponset, Mass.
*John H. Mathis Co., Camden, N. J.
*Frank L. Sample, Jr., Inc., Boothbay Harbor, Me.
*Southwest Boat Corp., Southwest Harbor, Me.
*Sturgeon Bay Shipbuilding & Dry Dock Co., Sturgeon Bay, Wis.
*Wheeler Shipbuilding Corp., Ft. of 154th St. & East River, Whitestone, L. I., N. Y.

STEERING GEAR
*The Edson Corp., 49-51 D St., South Boston, Mass.
Sperry Gyroscope Co., Inc., Great Neck, N. Y.

STERN BEARINGS
*Hathaway Machinery Co., New Bedford, Mass.

TRAWLING EQUIPMENT
*Dagle & MacMillan Co., 170 Border St., East Boston, Mass.
*Hathaway Machinery Co., New Bedford, Mass.
New England Trawler Equipment Co., 301 Eastern Ave., Chelsea, Mass.

WIRE ROPE
*Bethlehem Steel Co., Bethlehem, Pa.

When You Ship FISH, LOBSTERS
or SCALLOPS to the Boston Market
FOR BEST RESULTS SHIP TO
R. S. HAMILTON COMPANY
On the Boston Market over 30 Years
17 Administration Building Fish Pier, Boston, Mass.

CONSIGNMENTS SOLICITED FOR
Fish, Hard and Soft Crabs, Crab Meat
Frogs Legs, Shrimp and Snappers
WM. M. McCLAIN
Wholesale Dealer and Commission Merchant
231 S. Front St. — PHILADELPHIA, PA. — 230 S. Water St.

Where to Ship in New York

Beyer Fish Co., Fulton Fish Market

International Fish Co., 111 Fulton Fish Market

Lester & Toner, Inc., Fulton Fish Market

South Fish Co., 31 Fulton Fish Market

Frank W. Wilkisson, Inc., 16 Fulton Market

Marine Bargains

Draggers: 42′ x 12′6″ x 5′4″, built 1933, Power Superior 90 hp. with red. gear, new '42. Ices 18,000 lbs. 65′ x 17′ x 7′ built 1945, ices 65,000 lbs., power 171 hp. Buda, with red. gear. 70′ x 16′ x 9′, new in 1943, power F. M. 150 hp. Two holds, ices 90,000 lbs. All of the above now in commission—wire or write for particulars. Marine Diesel Engines: 150 hp. Model H. M. R. Cummins, like new; 170 hp. Superior, 5½ x 7, with red. gear, rebuilt. Superior Model MRA 4, 62 hp., red. gear, rebuilt. Cooper-Bessemer 370 hp. Model JR 11 x 14, 6 cyl. rebuilt. NEW Lathrop gas engine, Model LH, 60 hp. with 2 to 1 red. gear. New Chrysler Crown with 4.9 to 1 red. gear, and many others, write us as to your requirements. Knox Marine Exchange, Camden, Maine.

Used Marine Diesel Engines

1 Buda Model 6-DHMR—1879, 171 hp.—900 rpm. 3 to 1 reduction gear; 1 Buda Model 6-DHMR 691, 101 hp.—1200 rpm. 2 to 1 reduction gear; 1 Mack Mariner Model ENDM-457, 70 hp.—1500 rpm. 3 to 1 reduction gear. For further information, contact Rapp-Huckins Co., Inc., 501 Atlantic Avenue, Boston, Massachusetts. Telephone Hubbard 0775.

Wanted to Buy

Two draggers about 60 to 70 feet, with about 100 hp., under $10,000.00. Write particulars to the Narragansett Bay Packing Company, 383-393 Water Street, Warren, Rhode Island. Telephone Warren 0451 or 1176-W.

Dragger For Sale

Dragger "Josie II", 52′ x 14½′ x 5½′, built 1925. Engine, 60 Atlas, 6 yrs. old. Full equipment. Asking $10,000. Vita Lo Piccolo, 45 Fleet Street, Boston, Mass., Tel. Cap. 2743.

Sea Food Plant Wanted

Do you have a sea food plant for sale or rent? We need one, but it must be located where crabs and experienced crab pickers are available. Reply to Box 8, Atlantic Fisherman, Goffstown, N. H.

Dragger For Sale

45′ x 14′ x 5′, 60 hp. Atlas Diesel, Hathaway winch. In excellent repair, and equipped completely, ready for fishing. Owner has new boat and will sacrifice. Write Box "W", Atlantic Fisherman, Goffstown, N. H.

Wanted

Dragger of fifty ft. variety, with winch. Diesel power preferred. Address, Box 10, Atlantic Fisherman, Goffstown, N. H.

Engine For Sale

Standard Diesel Marine, direct drive, 100 hp., 600 rpm., air starting, complete with compressor tanks, etc., $500. Viking Fleet, Freeport, L. I., N. Y.

For Sale

One new 171 hp. 6DCMR Buda Marine Diesel engine. Engine in original crate. Box 9, Atlantic Fisherman, Goffstown, N. H.

Index to Advertisers

American Mfg. Co. 4
Atlas Imperial Diesel Engine Co. 30

Marine Division, Bendix Aviation Corp. 27
Bethlehem Steel Co. (Shipbuilding) 36
Bethlehem Steel Co. (Wire Rope) 42
Bludworth Marine 34
The Buda Co. 35

Chrysler Corp. 41
Columbian Bronze Corp. 53
Columbian Rope Co. 1
Clark Cooper Co. 55
Cummins Engine Co. 6

Dagle & MacMillan Co. 54
R. S. Danforth 29
Delaware Bay Shipbuilding Co., Inc. 56
Bill DeWitt Baits 54

R. J. Ederer Co. 11
The Edson Corp. 53
Enterprise Engine & Foundry Co. (Marine Engine Div.) 39
Enterprise Engine & Foundry Co. (Process Machinery Div.) 19

Fairbanks, Morse & Co. 17

Gray Marine Motor Co. 55
Gulf Oil Corp. 31

Hathaway Machinery Co. 47
Joshua Hendy Iron Works 2
Higgins Industries, Inc. 42
Hyde Windlass Co. 54

Jabsco Pump Co. 50

Kelvin-White Co. 13

Lane Lifeboat & Davit Corp. 49
Geo. Lawley & Son Corp. 10
The Linen Thread Co., Inc. 46
Lister-Blackstone, Inc. 33

Mack Mfg. Corp. 51
Marine Products Co. 54
John H. Mathis Co. 17
The Maxim Silencer Co. 8
Michigan Wheel Co. 9
Murphy Diesel Co. 3

The National Supply Co. 7
New Bedford Cordage Co. 52

Osco Motors Corp. 48

Palmer Bros. Engines, Inc. 54
Pauls Fish Net Co. 54
H. O. Penn Machinery Co., Inc. 54
Pettit Paint Co., Inc. 54

Radiation Products, Inc. 54
Red Wing Motor Co. 54
John Reiner & Co. 54

St. Louis Cordage Mills 54
Frank L. Sample, Jr., Inc. 54
Southwest Boat Corp. 54
Southworth Machine Co. 54
Stamford Foundry Co. 54
A. M. Starr Net Co. 54
Sturgeon Bay Shipbuilding & Dry Dock Co. 54
Submarine Signal Co. 30
Superior Diesels 54

Twin Disc Clutch Co. 54

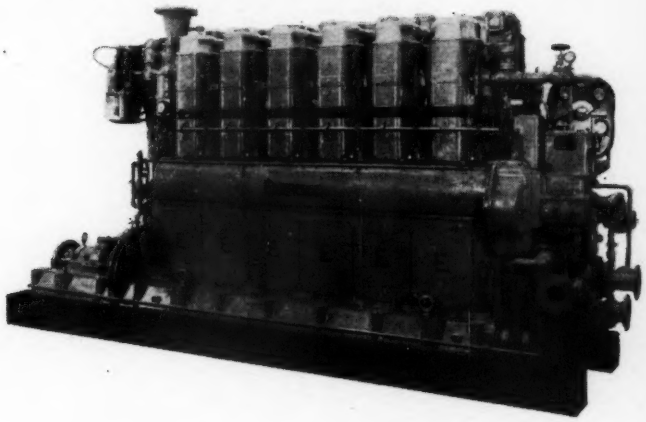
U. S. Rubber Co. 54

Elisha Webb & Son Co. 54
Westerbeke Fishing Gear Co., Inc. 54
Wheeler Shipbuilding Corp. 54
Willard Storage Battery Co. 54
Wolverine Motor Works Inc. 54

powered by

ENTERPRISE

"Boaz", 70' by 15' 5" by 7'; owner, C. G. Leverette Towing Co., New Orleans. Power, DMG 36 Turbo-Charged Enterprise, 600 hp at 400 rpm.



Tugboat operators in the Gulf area are proving that the surest means to develop the maximum pulling ability of their hulls is to power them with the Turbo-charged Enterprise Diesel.

Turbo-charging by Enterprise means up to fifty per cent more horsepower at the same rpm, meaning more towing power and more profit for YOU.

The above Enterprise Turbo-Charged Diesel, model DMG 36, 600 hp at 400 rpm, may be exactly the model required for repowering your present hulls or driving your prospective boats. Other models are available, from 200 to 1800 hp. Contact the nearest Enterprise branch Today!

ENTERPRISE
ENGINE AND FOUNDRY CO.

18TH & FLORIDA STREETS SAN FRANCISCO, CAL.

BOSTON NEW YORK WASHINGTON CHICAGO SEATTLE

SOUTHERN SALES & SERVICE

NEW ORLEANS—POYDRAS & BARONNE STS. PHONE MA 6755-6756

"Maud Wilmot", 85' by 18' by 8'; owner, George W. Whiteman, New Orleans. Power, DMG 36 Turbo-Charged Enterprise, 600 hp at 400 rpm.

Extra dividends...

FOR PROFIT-WISE FISHERMEN

Like any wise investment, dependable netting pays extra dividends in fish caught and money earned.

That's why so many successful fishermen use GOLD MEDAL netting. They know that even though some rips in a net are unavoidable, GOLD MEDAL'S uniformity and rugged strength mean fewer holes—put the fishing odds in their favor.

These aren't idle words. There's justification for them. Ours is the only netting company that makes its own twine in its own mills. This is important, because it assures maintenance of the high quality that has made GOLD MEDAL netting famous.

Be safe, buy wisely. Always use GOLD MEDAL netting. Made from clean, even yarn, perfectly twisted, then checked for strength, weight and size. It can't be beat for day-after-day fish catching dependability.

●

Other Netting Products:

A N & T Coy Linen Netting. Knox's Sea Island Gill Netting Gold Medal Hanging and Mending Twines • Plymouth Rope • A complete line of Netting accessories.

GOLD MEDAL NETTING
means controlled production in our own plants, from the bale of cotton to the finished netting. No other netting company can make this statement. This is your assurance of dependable quality.
GOLD MEDAL
The greatest name in netting
AS MODERN AS TOMORROW

The AMERICAN NET and TWINE Division

OF

The Linen Thread Co., Inc.

60 East 42nd Street, New York 17, N. Y.

Baltimore 3, Md. • Boston 10, Mass. • Chicago 10, Ill. • San Francisco 5, Cal. • Philadelphia 6, Pa. • Gloucester, Mass.